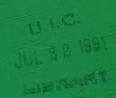
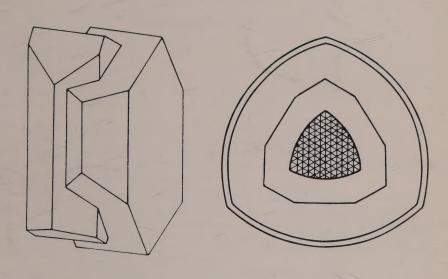


MINERALOGICAL ABSTRACTS

SCIENCE

Volume 39 1988 Index





Mineralogy

Geochemistry

Petrology



MINERALOGICAL ABSTRACTS

VOLUME 39 1988

PRINCIPAL EDITOR R. A. HOWIE

EDITORS

P. BROWNE, C. H. DONALDSON, J. M. HADFIELD, A. W. HALL, R. M. F. PRESTON, R. E. SAMSON

INDEXER DR. G. HODGSON

SUB-EDITORS

DR. T. W. BLOXHAM MR. R. J. L. COLVINE DR. A. L. GRAHAM MR. R. K. HARRISON

DR. R. K. HERD DR. D. A. C. MANNING DR. W. J. McHARDY DR. D. J. MORGAN

DR. R. J. PANKHURST

ORGANIZERS OF ABSTRACTS

Great Britain: MR. R. K. HARRISON, 27 Springfield Park, Twyford, Berkshire RG10 9JG.

America: DR. K. A. RIGGS, Dept. of Geology & Geography, Mississippi State University, Mississippi 39762.

Australia: DR. N. C. N. STEPHENSON, Univ. of New England, Armidale, N.S.W. 2351. PROF. H. G. SCHARBERT, Institut für Petrologie, Universität Wien. Austria:

DR. R. VAN TASSEL, Institut Royal des Sciences Naturelles, Brussels. Belgium: Brazil: DR. J. M. CORREIA NEVY, Instituto de Geociências, Universidade Federal de Minas Gerais,

30.000 Belo Horizonte, Minas Gerais.

PROF. IV. KOSTOV, Chair of Mineralogy, University of Sofia. Bulgaria: PROF. R. F. MARTIN, Dept. of Geology, McGill Univerity, Montreal. Canada:

Czechoslovakia: PROF. DR. M. KODĚRA, Katedra Min. Kryšt, University Komenského, Bratislava. MR. OLE JOHNSEN, Mineralogisk Museum, Østervoldgade 5-7, DK-1350 Copenhagen K. Denmark:

DR. M. LAGACHE, Ecole Normale Superieure, 46 Rue d'Ulm, 75005 Paris. France:

PROF. DR. K. von GEHLEN, Inst. für Geochemie Petrologie und Lagerstättenkunde der Germany:

Universität, Frankfurt, D-6000 Frankfurt a. M. 1. DR. V. K. NAYAK, Indian School of Mines, Dhanbad 826.

India: PROF. A. SINGER, Hebrew University, Rehovot, 76-100. Israel: Italy:

DR. ICHIRO SUNAGAWA, Inst. Min. Petr. & Econ. Geology, Tohoku Univ., Sendai. Japan: DR. R. O. FELIUS, Rijksuniversiteit Utrecht, Possbus 80.021, 3508 TA Utrecht. Netherlands:

New Zealand: DR. K. A. RODGERS, Dept. of Geology, University of Auckland. Norway: DR. G. RAADE, Mineralogisk-Geologisk Museum, Sars Gate 1, Oslo 5.

DR. K. A. BUTT, Atomic Energy Commission, P.O. Box 34, Peshawar University. Pakistan: PROF. L. A. A. BARROS, Lab. de Mineralogia y Petrologia, Av. Rovisco Pais, Lisboa 1. Portugal:

South Africa

DR. J. G. GUINEA, Inst. de Geología de Madrid, José Gutierrez Abascal 2, Madrid 6. Spain:

DR. B. LINDQVIST, Naturhistoriska Riksmuseet, 104 05 Stockholm 50. Sweden: PD. DR. W. B. STERN, Mineralog.-Petrograph. Institut der Universität, Basel. Switzerland:

DR. M. C. GÖNCÜOĞLU, MTA, Jeoloji Etüdl. D., 06520 Ankara. Turkey

PUBLISHED JOINTLY BY

THE MINERALOGICAL SOCIETY OF GREAT BRITAIN AND THE MINERALOGICAL SOCIETY OF AMERICA

ERRATA

Mineralogical Abstracts, Vol. 39

88M/0578	for K. Kassau read K. Nassau	88M/2847	for G. Cawthorn read R. G. Cawthorn
88M/1624	line 1, for 5 read S	88M/2983	line 1, delete clays
88M/2664	title and line 1, for parasapite read parasapaite	88M/3719	title, for FeSiO ₄ read Fe ₂ SiO ₄
88M/2814	line 6, for richerite read richterite	88M/4664	for A. C. Horton read A. C. Morton

ORGANIZATION OF ABSTRACTS

Arising from a decision taken at the meeting of the INTERNATIONAL MINERALOGICAL ASSOCIATION in Copenhagen in 1961 the Mineralogical Societies of America and Great Britain agreed to issue a joint statement to National Societies adhering to the Association inviting each Society to organize contributions of abstracts of papers published in the journals of its country on subjects relevant to *Mineralogical Abstracts*. This invitation was issued and has brought a gratifying response. Members of Societies which have agreed to co-operate in this way are entitled to receive *Mineralogical Abstracts* for their personal use at a reduced rate of subscription on application, *which must be made through their National Society*. The countries now co-operating include: AUSTRALIA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CZECHOSLOVAKIA, DENMARK, FINLAND, FRANCE, GERMANY, INDIA, ISRAEL, ITALY, JAPAN, NETHERLANDS, NEW ZEALAND, NORWAY, PAKISTAN, PORTUGAL, SOUTH AFRICA, SPAIN, SWEDEN, SWITZERLAND, TURKEY.

ABSTRACTORS

Contributors to this volume of Mineralogical Abstracts are:

Agrell, J. (J.A.), Gt. Britain; Aires Barros, L. (L.A.B.), Portugal; Akizuki, M. (M.Ak.), Japan; Arnaudova, R. (R.A.), Bulgaria; Aslanyan, S. (S.A.), Bulgaria; Barnes, J. H. (J.H.B.), U.S.A.; Bass, M.A. (M.A.B.), Gt. Britain; Bathurst, B. (B.B.), U.S.A.; Bayliss, P. (P.B.), Canada; Brearley, A. J. (A.J.B.), U.S.A.; Briggs, R. M. (R.M.B.), New Zealand; Browne, P. (P.Br.), Gt. Britain; Chisholm, J. E. (J.E.C.), Gt. Britain; Clark, A. M. (A.M.C.), Gt. Britain; Clayton, K. M. (K.M.C.), Gt. Britain; Coleman, L. C. (L.C.C.), Canada; Cooke, P. (P.C.), Gt. Britain; Cooper, J. W. (J.W.C.), Gt. Britain; Corsini, F. (F.C.), Italy; Crawford, M. L. (M.L.C.), U.S.A.; Dietrich, R. V. (R.V.D.), U.S.A.; Donaldson, C. H. (C.H.D.), Gt. Britain; Drysdale, D. J. (D.J.D.), Australia; Elsdon, R. (R.E.), Ireland; Frank-Kamenetskiĭ, V. A. (V.A.F.-K.), U.S.S.R.; Frisch, T. (T.F.), Canada; Frye, K. (K.F.), U.S.A.;

Gait, R. I. (R.I.G.), Canada; Gehlen, K. von, (K.v.G.), West Germany; Glass, G. B. (G.B.G.), U.S.A.; Göncüoğlu, M. C. (M.C.G.), Turkey; Hadfield, J. M. (J.M.H.), Gt. Britain; Hall, A. W. (A.W.H.), Gt. Britain; Harrison, R. K. (R.K.H.), Gt. Britain; Hartman, P. (P.H.), The Netherlands; Hayashi, H. (H.H.), Japan; Henderson, C. M. B. (C.M.B.H.), Gt. Britain; Herbert, H. K. (H.K.H.), Australia; Holtstam, D. (D.H.), Sweden; Howie, R. A. (R.A.H.), Gt. Britain; Hsu, L. C. (L.C.H.), U.S.A.; Janeczek, J. (J.J.), Poland; Kennard, T. M. (T.M.K.), Gt. Britain; King, S. (S.K.), Gt. Britain; Komatsu, H. (H.K.), Japan; Kopp, O. C. (O.C.K.), U.S.A.; Kostov, I. (I.K.), Bulgaria; Lagache, M. (M.L.), France; Lesher, C. M. (C.M.L.), U.S.A.; Lindqvist, B. (B.L.), Sweden; Love, L. G. (L.G.L.), Gt. Britain; McCormick, G. R. (G.R.M.), U.S.A.; Metzger, E. P. (E.P.M.), U.S.A.; Mitchell, R. S. (R.S.M.), U.S.A.; Miura, H., (H.M.), Japan; Morgan, D. J. (D.J.M.), Gt. Britain;

Nafziger, R. H. (R.H.N.), U.S.A.; Natale, P. (P.N.), Italy; Nayak, V. K. (V.K.N.), India; Neves, J.M.C. (J.M.C.N.), Brazil; O'Donoghue, M. J. (M.O'D.), Gt. Britain; Parsons, I. (I.P.), Gt. Britain; Raade, G. (G.R.), Norway; Redpath, E. R. (E.R.R.), Gt. Britain; Riggs, K. A. (K.A.R.), U.S.A.; Robinson, G. W. (G.W.R.), U.S.A.; Rodgers, K. A. (K.R.), New Zealand; Rosenblum, S. (S.R.), U.S.A.; Samson, R. E. (R.E.S.), Gt. Britain; Selby, J. (J.S.), Australia; Shima, H. (H.S.), Japan; Siegrist, M. (M.S.), U.S.A.; Stephenson, N. C. N. (N.C.N.S.), Australia; Stern, W. (W.S.), Switzerland; Takeda, H. (H.T.), Japan; Taylor, D. (D.T.), Gt. Britain; Tomita, K. (K.T.), Japan; Trembath, L. T. (L.T.T.), Canada; Van Tassel, R. V. (R.V.T.), Belgium; Venkatakrishnan, R. (R.V.), U.S.A.; Watt, W. S. (W.S.W.), Denmark; Yamanaka, T. (T.Y.), Japan; Zemann, J. (J.Ze.), Austria; Zilczer, J. A. (J.A.Z.), U.S.A.

ABBREVIATIONS AND SYMBOLS

used in the text of abstracts

M.M Mineralogical Magazine	: M.A Mine	ralogical Abstracts : A.M Americ	an Mineralogist	
CHEMICAL & PHYSICAL CHEMIC	CAL	——reciprocal lattice lengths of		
CHEMICAL & THI BICAL CHEMIC	71112	edges	a,* b,* c*	
atomic absorption spectrophoto-		——interaxial angles direct lattice	α, β, γ	
metry	AAS	————reciprocal lattice	$\alpha^*, \beta^*, \gamma^*$	
cation-exchange capacity	c.e.c.	reciprocal lattice	α, ρ, γ	
concentrated	conc.	OPTICAL		
differential thermal analysis	DTA	dispersion, e.g.	r > v	
dilute	dil.	transmission electron microscopy	TEM	
disintegrations per minute	d.p.m.	extinction angle, e.g	y:c	
equivalent U ₃ O ₈	eU_3O_8	infrared	IR	
ethylenediamintetra-acetic acid	EDTA	optic axial angle	2V	
fugacity	f	——plane	O.A.P.	
gas chromatography	GC	refractive index in text	refr. ind.	
heat of formation (absolute tem-		——of isotropic mineral	n	
perature subscript)	ΔHf	refractive indices	**	
hydrogen ion conc. acidity	pH	of uniaxial mineral	ω, ϵ	
insoluble residue	insol. res.	of biaxial mineral	α, β, γ	
isotopes, e.g	⁴⁰ Ar, ⁴⁰ K	scanning electron microscopy	SEM	
large ion lithophile	LIL		SEW	
loss on ignition	ign. loss	sign of biaxiality	237	
mid-ocean ridge basalt	MORB	negative	2V _a or -	
milliequivalent	me.	positive	2V _p or +	
mass spectrometry	MS	ultraviolet	UV	
microgramme	μg	PHYSICAL		
million-years	m.y.	calculated	calc.	
neutron activation analysis	NAA			
not determined	n.d.	cycles per second	c/s °C	
not found	nt. fd.	degree centigrade		
not present	nil	density	D (quote units)	
nuclear magnetic resonance	NMR	—, relative, e.g	D_4^{20}	
parts per billion	ppb	electron paramagnetic resonance hardness	e.p.r. H.	
parts per million	ppm	111 (0 1 CD.)	kbar	
rare earths	REE			
standard mean ocean water	SMOW	. (10.2	m.p.	
strength of solution, normal	N		μm	
———molar	M	nanometre (10 ⁻⁶ mm)	nm	
substances in ionic state		natural remanent magnetization	n.r.m.	
anions, e.g	Cl-, SO ₄ -	pressure	P	
cations, e.g	K ⁺ , Fe ³⁺	soluble	sol.	
thermogravimetric analysis	TGA	specific gravity, terms of reference		
trace	tr.	not known	sp. gr.	
X-ray powder diffraction	XRD	temperature	T	
X-ray fluorescence analysis	XRF	thermoluminescence	TL	
		Vickers hardness number	VHN	
CRYSTALLOGRAPHIC & STRUCT	URAL	wavelength	λ	
1	Å	SYMBOLS		
annual all annual				
C ! !!	a, b, c	approximately equal to	~	
C	(hkl)	equal to	=	
1 1	{hkl}	equal to or greater than	>	
	[hkl]	equal to or less than	≤	
indices of X-ray diffractions	hkl	greater than	>	
intensity	I	less than	<	
—relative	I/I_0	not equal to	≠	
interplanar spacing	d	parallel to	II .	
mica structural polymorphs	1 M ₁ , 2 M	per cent	%	
Siegbahn units	kX	per mille	% 00	
unit cell, formula units	Z	perpendicular to	1	
ranget distances				

Abaigar, J., 88M/5289 Abakumova, L. N., 88M/1271 Abbe, G. R., 88M/4004 Abbona, F., 88M/2055 Abbott, M. J., 88M/0680, 5653 Abbott Jr, R. N., 88M/5107 Abdallah, A., 88M/5501 Abdel-Gaphour, E. S., 88M/ 1772 Abdel-Monem, A. A., 88M/1626 Abdel-Rahman, A.-F. M., 88M/ 4259 Abdel-Rahman, A. M., 88M/ 0740, 4488, 4898 Abd El-Shafy, A., 88M/2984 Abe, K., 88M/5331 Abe, T., 88M/2244 Abe, Y., 88M/3414, 4192 Abel, F., 88M/6436 Abell, R. S., 88M/5220 Abercrombie, H. J., 88M/6021 Abers, G. A., 88M/4619 Abeysinghe, P. B., 88M/0808 Abousehly, A. M., 88M/0518 A'Braham, I., 88M/3390 Abraham, K., 88M/6089 Abrecht, J., 88M/3073 Abriel, W., 88M/0535 Abulgazina, S. D., 88M/4315 Abushayeva, V. V., 88M/0847 Acanfora, F., 88M/0168 Acenas, M., 88M/5289 Acker, J. G., 88M/2006 Ackermand, D., 88M/3097, 3120, 4736 Acworth, R. I., 88M/2369 Adamchuk, I. P., 88M/5710 Adamowska-Korus, K., 88M/ 5006 Adams, C. J., 88M/4911 Adams, J. M., 88M/1732 Adams, M. C., 88M/5838 Addicott, W. O., 88M/6494 Adediran, S. A., 88M/2289 Aden, G., 88M/3301 Adey, M. A., 88M/5037 Adolphi, P., 88M/4652 Adriano, D. C., 88M/4001 Affaton, P., 88M/3612 Afford-Stevens, A. L., 188M/ 5941 Afifi, A. M., 88M/4921 Aftalion, M., 88M/1135, 1603, 3206, 4879, 4880 Afzali, H., 88M/4459 Agard, J., 88M/1887 Agarwal, R., 88M/1729 Ager, T. A., 88M/3170 Aggarwal, P. K., 88M/0659, 4755 Aggett, J., 88M/5333

Aghib, F. S., 88M/1420

Aglietti, E. F., 88M/0148

Agomor, A. K., 88M/1254

Agrawal, D. P., 88M/4033

Agrawal, R. D., 88M/5461

Ague, J. J., 88M/1294 Aguilar-y-Vargas, V. H., 88M/ 1363 Aguirre, L., 88M/3119 Aharon, P., 88M/0772 Ahmad, F., 88M/6493 Ahmad, M., 88M/0650, 5285 Ahmad, S. A., 88M/2693 Ahmad, S. M., 88M/2314 Ahmad, T., 88M/3949 Ahmed, A. H. M., 88M/0527 Ahmed, M., 88M/4658 Ahmed, Z., 88M/2948, 3086 Ahn, J. H., 88M/0139, 0281, Ahrens, T. J., 88M/3652 Aihara, A., 88M/2992 Aiken, G. R., 88M/2447 Ainslie, L. C., 88M/5176 Ainsworth, C. C., 88M/0133 Aires-Barros, L., 88M/0800 Airey, P. L., 88M/3907 Aissa, M., 88M/3676, 3936, 4306 Aitken, M. J., 88M/1543 Aizawa, J., 88M/2992 Aizawa, S., 88M/5722 Aizenshtat, Z., 88M/3352, 4994 Ajakaiye, D. E., 88M/4173 Akai, J., 88M/2574 Akaiwa, H., 88M/5722 Akande, S. O., 88M/3593 Akaogi, M., 88M/0242, 0551 Akasaka, M., 88M/6007 Akat, U., 88M/4569 Akbasli, A., 88M/1313, 4568 Akdeniz, N., 88M/4484 Akgun, A. F., 88M/1698 Akhmanova, M. V., 88M/2135 Akiman, O., 88M/1263 Akimoto, J., 88M/5089 Akimov, V. V., 88M/3682 Akinfiyev, N. N., 88M/1987 Akizuki, M., 88M/0265 Akpanika, O. I., 88M/2466 Aksay, I. A., 88M/3703 Aksoyoglu, S., 88M/5010 Aksyuk, A. M., 88M/5415 Alavi-Tehrani, N., 88M/1388 Albaiges, J., 88M/0842, 2427 Albarede, F., 88M/0011, 2304, 2347, 3975, 5812, 5817 Albero, M. C., 88M/5863 Albertazzi, S., 88M/3635 Alberti, A., 88M/1816, 3487. 3489, 5128 Albrecht, P., 88M/2446 AlDahan, A. A., 88M/0161, 1010, 1409, 1410, 6040 Aldanazarov, R. A., 88M/2308 Alderton, D. H. M., 88M/5593, 6003, 6066 Aldridge, A. J., 88M/5317 Aldridge, L. P., 88M/0256, 6048

Aleinikoff, J. N., 88M/0040, 1655, 2276, 3911 Aleksandrov, I. V., 88M/2199, 5643 Alekseyev, V. A., 88M/3681, 3697 Alekseyeva, T. V., 88M/0523 Aleksiev, E., 88M/2129 Alexander, C. M. O., 88M/ 0936, 0950 Alexander, G., 88M/2427 Alexander, J., 88M/5811 Alexander, P. O., 88M/5928 Alexander, R., 88M/4147, 5915 Alexander Jr, E. C., 88M/3189 Alexiev, E., 88M/0076 Alfaro, G., 88M/6307 Alford, C., 88M/3130 Al-Fuqha, H., 88M/6243 Al-Hassan, M. E., 88M/6289 Al-Imam, O. A. O., 88M/2986 Ali, O. M., 88M/3375 Ali, S., 88M/1626, 4567 Alibert, C., 88M/2225, 6169 Alinat, M., 88M/6002 Al-Jassar, T. J., 88M/0661 Allamandola, L. J., 88M/0956 Allan, J. F., 88M/3962 Allard, B., 88M/5314 Allbrook, R. F., 88M/5056 Allegre, C. J., 88M/3784, 4193, 5587, 5624 Allegret , A., 88M/1605 Allen, A. R., 88M/3087 Allen, C. C., 88M/3636 Allen, C. M., 88M/0748 Allen, D. A., 88M/2512 Allen, F. M., 88M/3450, 3453 Allen, H. E., 88M/4961 Allen, P. M., 88M/2892 Allen, R. L., 88M/6250 Aller, R. C., 88M/5357 Alley, R. B., 88M/6103 Allibert, M., 88M/0464 Allison, D. T., 88M/4519 Allsop, J. M., 88M/6113, 6158, 6461 Allsopp, H. L., 88M/3015, 4910 Almendinger, J. E., 88M/5773 Alonso, J. Saavedra, 88M/0904 Alperovitch, N., 88M/0155 Alpers, C. N., 88M/1060 Alric, G., 88M/0805 Alsac, C., 88M/6233 Alsharhan, A. S., 88M/4032 Al Said, S. B. B. G., 88M/5857 Alt, J. C., 88M/0654 Altaner, S. P., 88M/1805, 3366, 4675, 6084 Altebaumer, F.-J., 88M/5916 Al-Temeemi, A., 88M/4327 Altherr, R., 88M/3802 Alvarado, G. E., 88M/6279 Alvarez, A. G., 88M/3378 Alvarez Martin, J. B., 88M/

Aly, F. A., 88M/2057 Alzetta, G., 88M/3129 Amand, P. St., 88M/6352 Amarantidis, G., 88M/4787 Amari, S., 88M/5729 Amberger, A., 88M/2368 Ambrose, K., 88M/2964 Amcoff, O., 88M/2041, 2627 Ames, D., 88M/1898 Amigo, J. M., 88M/4284 Amiri-Garroussi, K., 88M/6314 Amor, I. Asensio, 88M/6236 Amoros, J. L., 88M/5147, 5435 Amosova, K. B., 88M/3899 Amosse, J., 88M/0464, 2227 Amouric, M., 88M/0254 Amputch, M. A., 88M/0131 Amthauer, G., 88M/3729 Amundsen, H. E. F., 88M/1227 Amundson, R., 88M/4049 Ananaba, S. E., 88M/4173 Anand, R. R., 88M/3386, 3424, 3425, 5034 Anati, D. A., 88M/2387 Ancochea, E., 88M/2741, 6171 Anders, E., 88M/2528, 2539, 4224, 4225, 5961-5963, 5982 Anders, M. H., 88M/0966 Andersen, M. C., 88M/6378 Andersen, T., 88M/0698, 2345, 2808, 3919, 5625 Anderson, A. J., 88M/1084 Anderson, C., 88M/1373 Anderson, D. L., 88M/1207 Anderson, G. M., 88M/0667, 2077, 5399, 5428 Anderson, K. A., 88M/0960 Anderson, L. G., 88M/5798 Anderson, M. L., 88M/3799 Anderson, P. R., 88M/5036 Anderson, R. A., 88M/0407 Anderson, R. F., 88M/2402 Anderson, T., 88M/6150 Anderson, W. B., 88M/5286 Anderson, Ye. B., 88M/4953 Anderson Jr, A. T., 88M/1295 Anderson, T. F., 88M/2139 Anderson-Fontana, 88M/ 4853 Andersson, P., 88M/4012 Andersson, S., 88M/0235 Ando, K., 88M/3750 Andrade Couce, M. L., 88M/ 0617 Andras, P., 88M/3860 Andre, L., 88M/3208, 4708, 6119 Andreae, M. O., 88M/0083 Andree, M., 88M/5523 Andreev, V. P., 88M/1389 Andreoli, M. A. G., 88M/5175, 5176 Andreoni, W., 88M/0228 Andreopoulos-Renaud, U., 88M/ 0022 Andresen, A., 88M/1229 Andretta, D., 88M/0766, 1613

Andrew, A. S., 88M/5273, 5594 Andrews, A. J., 88M/1650 Andrews, C. C., 88M/0860 Andrews, J. E., 88M/0163, 1412, 5696 88M/0488, Andrews, J. N., 2374, 3835, 3836 Andrews, J. W., 88M/3714 Andrews, M. J., 88M/6322 Andrews-Speed, C. P., 88M/ 0314, 0326 Andreyev, V. P., 88M/2086 Andreyeva, E. P., 88M/0620 Andreyeva, Ye. D., 88M/5646 Andrulakis, J., 88M/2465 Anfilogov, V. N., 88M/1990 Angel, R. J., 88M/1793, 5066, 6438 Angelin, M. L., 88M/4143 Angell, C. A., 88M/5081 Angevine, C. L., 88M/0738, 1558 Angino, E. E., 88M/3838 Angle, M. P., 88M/5831 Anglin, C. D., 88M/1896 Anhaeusser, C. R., 88M/1624 Aniel, B., 88M/2280 Anikiyev, V. V., 88M/4102 Anil, M., 88M/0375, 3542, 3591 Anketell, J. M., 88M/1152 Ankinovich, E. A., 88M/1038 Annersten, H., 88M/3449, 3456 Anon, 88M/0218, 0585, 1197, 2109, 2863, 4969, 5246, 6240 Anon (IAEA), 88M/4964, 4970 Anovitz, L. M., 88M/3770 Anselmi, B., 88M/0766 Anstey, N. A., 88M/3146 Antenucci, D., 88M/4126 Antipin, V. S., 88M/0307 Antonio, M., 88M/5286 Antonjan, G. M., 88M/6087 Anzalone, S. A., 88M/5294 Anzelmo, J. A., 88M/3313 Aoki, K., 88M/2755, 6014 Aoki, Y., 88M/2058 Aparicio, A., 88M/0707 Aplonov, V. S., 88M/6043 Appel, E., 88M/1537 Appel, P. W. U., 88M/0583, 4867, 6105 Appleby, P. G., 88M/4865, 5318 Applegate, J., 88M/6351 Appleman, D. E., 88M/3496 Appleton, J. D., 88M/2486 Appleyard, E. C., 88M/2357 Applin, K. R., 88M/2020 Apted, J. P., 88M/3418 Aquilano, D., 88M/5431 Arai, F., 88M/1326 Arai, S., 88M/1281, 2193, 4505, 4608 Arai, T., 88M/3101 Aramaki, S., 88M/0683, 1322 Aramaki eds, S., 88M/1296 Aranda-Gomez, J. J., 88M/2737 Aranovich, L. Ya., 88M/2066 Aranyossy, J.-F., 88M/5864

Arce, R., 88M/0398 Arch, J., 88M/6102 Archer, F. C., 88M/1956 Archer, P., 88M/4512 Archibald, D. A., 88M/0046, 3230 Arco, M. del, 88M/1735 Arculus, R. J., 88M/0672, 2736, 2772, 6221 Aregba, A. P., 88M/3612 Arenas, R., 88M/6235 Arends, J., 88M/5442, 6446 Arganaraz, P., 88M/1901 Aringhieri, R., 88M/3749 Ariskin, A. A., 88M/3646 Aristovskaya, T. B., 88M/1779 Arita, K., 88M/3102, 4507 Arita, M., 88M/3608 Arkai, P., 88M/3082, 6406 Arkhipenko, D. K., 88M/6046 Armagnaac, C., 88M/6451 Armands, G., 88M/3921 Armbruster, 88M/0276, T., 1822, 2653 Armbruster, Th., 88M/3455 Armienti, P., 88M/1301, 4597, Armour-Brown, A., 88M/5180 Armstrong, E. E., 88M/4924 Armstrong, J. T., 88M/4218, Armstrong, R. L., 88M/0043, 2866, 2874, 3233 Arnaud, R. J. St., 88M/3388 Arnaudov, V., 88M/0633, 0717, 1004 Arnaudova, R., 88M/1004 Arndt, J., 88M/0963, 6449 Arndt, N., 88M/5668 Arndt, N. T., 88M/2272, 4571 Arneth, J. D., 88M/2313 Arnold, M., 88M/0002, 0838. 3862, 5328 Arnorsson, S., 88M/3801 Arnould, M., 88M/5980 Arribas, A., 88M/1908, 3530 Arribas, A. Garcia, 88M/0234 Arroyo, F. Tornos, 88M/0340, 3580 Artem'yev, V. Ye., 88M/5848 Arthur, J. D., 88M/4522, 6351 Arthurton, R. S., 88M/6111 Artigas, T., 88M/6117 Artignan, D., 88M/5922 Artioli, G., 88M/3488 Arunachalam, J., 88M/5617 Asensio Amor, I., 88M/6236 Asghar, M., 88M/0215 Ash, L. A., 88M/3465 Asheim, A., 88M/4287 Ashikhmina, N. A., 88M/2516, 2559 Ashley, P. M., 88M/0977, 3598, 5215 Ashwal, L. D., 88M/4774 Ashworth, J. R., 88M/5485 Aspden, J. A., 88M/0045 Assorgia, A., 88M/0014 Astin, T. R., 88M/6319

Asuen, G. O., 88M/4010, 5697 Atabek'yants, K. P., 88M/2354 Atalla, S. R., 88M/0518 Ataman, G., 88M/3282 Atherden, P. R., 88M/0876 Atherton, M. P., 88M/3119, 4457 Atkin, B. P., 88M/5698 Atkinson, I. A. E., 88M/5050 Atkinson, K., 88M/2966 Attanasi, E. D., 88M/0388, 3606 Attawiya, M. Y., 88M/3943 Attoh, K., 88M/2913 Atwater, B. F., 88M/1592 Atzmony, U., 88M/3278 Atzori, P., 88M/4056, 4717 Aubaque, M., 88M/3576 Audley-Charles, M. G., 88M/ 4618, 6126 Audren, C., 88M/2569, 6387 Auge, T., 88M/0345, 1317 August, C., 88M/1743 Augustin-Gyurits, K., 88M/5882 Aulstead, K. L., 88M/5543 Auret, S. H., 88M/4910 Aurisicchio, C., 88M/2602, 6172 Austrheim, H., 88M/2248 Autran, A., 88M/4472 Auvray, B., 88M/1231 Auwera, J. Vander, 88M/4708 Avchenko, O. V., 88M/1464 Averill, S. A., 88M/0882 Averkin, Y. A., 88M/3659 Avery, M. P., 88M/2999 Avila Martins, J., 88M/1380 Avilov, V. I., 88M/5818 Avilova, S. D., 88M/5818 Awad, M. A., 88M/5860 Awal, K. P., 88M/1729 Axtmann, E., 88M/0495 Ayalon, A., 88M/1487, 3228 Aydin, A., 88M/4544 Ayhan, A., 88M/3605, 4172 Aylmer, D., 88M/5972 Ayora, C., 88M/2153, 4318 Ayrton, S., 88M/4448 Ayuso, R. A., 88M/2704, 6029 Azambre, B., 88M/1239 Azcona, M. C. Lopez de, 88M/ 6117, 6485 Azencott, C., 88M/3931 Azevedo, J. M. Martins de, 88M/1380 Azmatullah, M., 88M/4489 Azumi, T., 88M/3750 Azzaro, E., 88M/2379 H., 88M/0029. 1598, 3246, 4044

Baadsgaard, H., 88M/0029, 1598, 3246, 4044 Baar, H. J. W. de, 88M/5847 Baas, M., 88M/0850, 2412, 5903 Babcock, R. S., 88M/4510 Babkine, J., 88M/1312 Babu, B. Ravindra, 88M/4384

Babu, M. Mahesh, 88M/4393 Bachiorrini, A., 88M/0137 Bachmann, H. G., 88M/5930 Bachtiger, K., 88M/1911 Back, M. E., 88M/2623 Backes, C. A., 88M/0845, 5894 Bacon, C. R., 88M/1357, 5674, 6052 Badalamenti, F., 88M/2379 Badaut-Trauth, D., 88M/0113 Badmayeva, Zh. O., 88M/2431 Badraoui, M., 88M/1751 Badyukov, D. D., 88M/5709 Baedecker, P. A., 88M/2327, 5942 Baehni, L. A., 88M/3066 Baer, A. J., 88M/0096 Baerlocher, C., 88M/3486 Baes III, C. F., 88M/1981 Baeyens, W., 88M/4082 Bafor, B. E., 88M/0335 Bagdasarov, E. A., 88M/1030, Bagdasarov, Yu. A., 88M/4294 Baglow, N., 88M/6287 Bahat, D., 88M/2944 Bahranowski, K., 88M/1731 Bahuguna, V. K., 88M/4402 Bai, J., 88M/4503 Bai, Z., 88M/2001 Baidya, T. K., 88M/4901 Bailes, R. J., 88M/0358 Bailey, A., 88M/4160 Bailey, D. K., 88M/1211, 2783, 3789 Bailey, S. W., 88M/0183, 0258, 1801, 3466, 5112 Baillie, M. G. L., 88M/4884 Baillif, P., 88M/3639 Bain, D. C., 88M/0200 Bain, J. H. C., 88M/5220 Bairova, E. D., 88M/5647 Bajo, C., 88M/4080 Bajwah, Z. U., 88M/3908 Bakare, P. P., 88M/2033 Baker, A. J. M., 88M/4175 Baker, B. H., 88M/1622, 2795, 3224 Baker, D. E., 88M/4995 Baker, D. R., 88M/1284 Baker, E. M., 88M/5273, 5274 Baker, E. T., 88M/3177, 4109, 5835 Baker, E. W., 88M/0856, 2413 Baker, J., 88M/3105 Baker, J. H., 88M/3856, 3920 Baker, M. C. W., 88M/5242 Baker, P. A., 88M/4324 Baker, P. E., 88M/3960 Bakhchisaraitsev, A. Yu, 88M/ 1085 Bakirova, S. F., 88M/4141 Bakke, O., 88M/2459 Bakke, S., 88M/0970 Baksi, A. K., 88M/2240, 3230 Balabin, A. I., 88M/5423 Balaes, A. M. E., 88M/4951 Balakrishnan, P., 88M/4393 Balakrishnan, S., 88M/0724

Balashaytis, E. I., 88M/4793 Balashov, V. N., 88M/5348 Balashov, Yu. A., 88M/5713 Balazs, E., 88M/3080 Balderer, W., 88M/3830, 3831, 5873 Baldock, J. W., 88M/0909 Baldridge, W. S., 88M/5673 Baldwin, D. A., 88M/0039 Baldwin, D. K., 88M/1975 Bale, P., 88M/2721, 3055 Balistrieri, L. S., 88M/0505, 3758, 4111 Balitskaya, L. V., 88M/5516 Balitsky, V. S., 88M/5516 Ball, D. G. A., 88M/5467 Ball, F. D., 88M/2443 Ball, N. A., 88M/1006 Ball, T. K., 88M/1875 Ballance, P. F., 88M/0105 Ballantyne, G. H., 88M/5270 Ballantyne, J. M., 88M/4113 Ballard, S., 88M/4776, 6453 Ballbe Llonch, E., 88M/3348 Ballestracci, R., 88M/4580 Ballet, O., 88M/5088 Ballevre, M., 88M/3055, 6023, 6389, 6397 Ballhaus, C. G., 88M/3509 Balls, P. W., 88M/1955 Baloch, I. H., 88M/1756 Baltatzis, E., 88M/2222, 4264 Baltatzis, E. G., 88M/1057 Bamba, M., 88M/3102, 4507 Bambauer, H. V., 88M/3469 Ba-mkhalif, K. A., 88M/4653 Banard, W. M., 88M/0219 Banas, J., 88M/2608 Bancroft, G. M., 88M/5444, 5945 Bandy, W., 88M/4852 Bandyopadhyay, B. K., 88M/ 0807 Banerjee, D. C., 88M/3550 Banerjee, D. M., 88M/4397, 4398 Banerjee, H., 88M/2572, 4296 Banerjee, N. N., 88M/5716 Banerjee, S. K., 88M/4043, 4237 Banerjee, S., 88M/1103 Banfield, J. F., 88M/5028 Bank, H., 88M/0573, 0576, 5494, 5504 Banks, D. A., 88M/3525 Banner, F. T., 88M/4618, 6126 Banner, J. L., 88M/0077 Bannikova, L. A., 88M/3885, 5387 Banno, S., 88M/6030 Bannykh, L. N., 88M/5567 Bansal, B. M., 88M/4187, 4188 Banshchikova, I. V., 88M/3090 Bao, P., 88M/1028 Bao, Z., 88M/5205

Bar, R., 88M/4021

Baragar, W. R. A., 88M/6287

Barakat, A. O., 88M/4164

Barakso, J. J., 88M/2485

Baranova, N. N., 88M/2147 Barbarin, B., 88M/6162, 6164 Barbeau, C., 88M/0410 Barber, D. J., 88M/0950 Barberi, F., 88M/3254, 4604 Barbey, P., 88M/2673, 3034, 4711, 6407, 6408 Barbier, J., 88M/2467, 5071 Barbieri, M., 88M/5578, 6223 Barczuk, A., 88M/3699 Bard, E., 88M/0002, 5328 Bardintzeff, J.-M., 88M/1237, 2885 Bareche, E., 88M/4822 Bargar, K. E., 88M/4282 Barham, B. A., 88M/3167 Barinov, N. N., 88M/4265 Barka, A. A., 88M/2715 Barker, A. J., 88M/3037, 3038 Barker, C., 88M/4155 Barker, C. E., 88M/5542 Barker, D. L., 88M/3882 Barker, D. S., 88M/2801, 4433, 4436, 6174 Barley, M. E., 88M/0686, 2698, 3909, 4352, 4405 Barman, A. K., 88M/0527 Barman, T. R., 88M/2240 Bar-Matthews, M., 88M/0634 Barmina, G. S., 88M/3646 Barnes, C. G., 88M/0748, 2878, 4434 Barnes, H. L., 88M/0858, 3760, 5354 Barnes, J. H., 88M/1584 Barnes, J. W., 88M/3339 Barnes, P., 88M/1814 Barnes, R. G., 88M/1855 Barnes, R. P., 88M/6107 Barnes, S .- J., 88M/0286, 1458, 2274, 3859 Barnett, R. L., 88M/4753 Barnicoat, A. C., 88M/1468, 3051, 3052, 6396 Barnier, M., 88M/4132 Barnosky, C. W., 88M/1653 Baronnet, A., 88M/4966 Barox, F., 88M/3076 Barr, D., 88M/1108, 4357 Barr, S. M., 88M/0037, 1892, Barrachina, M. A. Duran, 88M/ 0904 Barral Silva, M. T., 88M/6058 Barrat, J.-A., 88M/2831 Barratt, B. C., 88M/5053 Barredo, F. Bea, 88M/2838 Barreiro, B. A., 88M/3241 Barrera, E., 88M/5572 Barrett, C. S., 88M/3326 Barrett, P. J., 88M/6136 Barrett, T., 88M/5742 Barrett, T. J., 88M/2325, 3961, 5399, 5428, 5601 Barrette, P. D., 88M/4728 Barretto, P. M. C., 88M/5182 Barriero, B. A., 88M/4421

Barroll, M. W., 88M/4539

Barron, P. F., 88M/0143

Barron, V., 88M/0765, 3757 Barros, J. G., 88M/5551 Barry, J. C., 88M/2606 Barsczus, H. G., 88M/1283, 1394, 2254, 5658 Barsdell, M., 88M/6297 Barsukov, V. L., 88M/3694, 5747, 5927 Bartashevich, O. V., 88M/2429 Barth, H. G., 88M/4919 Barthelmie, R. J., 88M/0401 Bartlett, P. M., 88M/3607 Bartlett, T. R., 88M/3765 Bartoli, F., 88M/3846 Barton, M., 88M/1228, 5634 Barton, M. D., 88M/0363, 1402, Barton Jr, J. M., 88M/0333, 4910. 6184 Barton Jr. P. B., 88M/1048 Bartos, P. J., 88M/5295 Baryshnikova, G. V., 88M/5978 Bar-Yosef, O., 88M/3227 Bas, H., 88M/4486 Bas, M. J. Le, 88M/2786, 4492, 4900 Basalaeva, I. V., 88M/2657 Bass, J. D., 88M/3494, 3655 Bassett, W. A., 88M/3748, 5402 Bassias, Y., 88M/6402 Basso, R., 88M/1037 Bastida, J., 88M/4284 Bastide, J.-P., 88M/3715 Basu, A., 88M/6348 Basu, A. N., 88M/1920 Basu, A. R., 88M/0804 Basu, N. K., 88M/1482, 4059 Basu, P. C., 88M/4399 Basumajumdar, A., 88M/0536 Batchelder, G. L., 88M/5840 Batchelor, A. S., 88M/0488 Batchelor, R. A., 88M/2798, 4467 Bates, T. H., 88M/5313 Bath, A. H., 88M/2374, 4011, 5810 Batiza, R., 88M/2953, 3962 Battaglia, A., 88M/3129 Battaglia, S., 88M/3129 Batterham, P. M., 88M/6181 Battisti, L. De, 88M/1577 Battistini, G. Di, 88M/1606 Baturin, G. N., 88M/0653, 0774, 2181, 2290, 4002, 4029, 5600, 5728 Baubron, J.-C., 88M/3889, 3993 Bauchau, C., 88M/3522 Baud, A., 88M/4021 Baudracco-Gritti, C., 88M/2624 Bauer, G. R., 88M/0737 Bauer, S., 88M/2730 Bauer, S. J., 88M/2047 Baumann, A., 88M/2234 Baumgartner, K., 88M/3669 Baumgartner, L., 88M/3668 Baumgartner, L. P., 88M/5345 Baur, W. H., 88M/3463 Bawiec, W. J., 88M/0388 Baxter, A. N., 88M/2822

Baxter, J. L., 88M/1634 Baxter, J. W., 88M/4179, 6478 Baxter, M. S., 88M/2373, 5316 Bayer, P., 88M/6222, 6225 Bayer, R., 88M/2770 Bayer, U., 88M/4861 Bayhan, H., 88M/4481, 4485 Bayliss, P., 88M/2641, 3276, 4302, 4922, 6062 Bazan, G., 88M/1738 Bazarova, A. N., 88M/0771 Bazerbachi, A., 88M/4088 Bazhenov, A. G., 88M/4260 Bazhenova, L. F., 88M/4260, 4339 Bazilevskaya, O. L., 88M/4140 Bazilevskiy, A. T., 88M/0935 Bea, F., 88M/1240 Bea Barredo, F., 88M/2838 Beach, R., 88M/2453 Beane, R. E., 88M/6373 Beard, J. S., 88M/4621 Beasley, T. M., 88M/0405, 5844 Beattie, M. J. V., 88M/2042 Beaucaire, C., 88M/2376, 2377, 4090 Beauchamp, B., 88M/3997 Beaudoin, A., 88M/0867 Beaudou, A. G., 88M/0214 Beauvais, A., 88M/0393 Bebien, J., 88M/2223, 6186 Beccaluva, L., 88M/0713, 2252, 6223, 6300 Bechler, E., 88M/2729 Becke, M., 88M/1527 Becker, R. H., 88M/2534, 4222 Becker, S. M., 88M/1187, 1189, 5622 Beckett, J. R., 88M/4221, 5954 Beckie, R. D., 88M/2022 Beckinsale, R. D., 88M/4883 Beckley, A. J., 88M/1142 Bedard, D. L., 88M/0417 Bedard, J. H., 88M/2571 Bedard, J. H. J., 88M/1196 Beddoe-Stephens, B., 88M/2800, 6157 Bedelean, I., 88M/6331 Beeman, M. L., 88M/6448 Beer, J., 88M/2520, 5523 Beer, K. E., 88M/1875 Beeson, M. H., 88M/0736, 4282 Begemann, F., 88M/0948, 5960 Beget, J. E., 88M/6273 Behairy, A. K. A., 88M/2986 Behnke, D., 88M/6491 Behr, H.-J., 88M/5787 Behrmann, J. H., 88M/2723, 3029 Behrns, R. J., 88M/1684 Behruzi, M., 88M/5104, 5105 Bei, G., 88M/1579 Beier, J. A., 88M/4052 Bein, A., 88M/4136, 4138 Bekkum, H. van, 88M/0268 Bekov, G. I., 88M/5709 Bektas, O., 88M/4482 Belayouni, H., 88M/0759

Belendorff, K., 88M/3162, 6475 Belevisev, Ya. N., 88M/3894 Belgorodskii, E. A., 88M/2903 Belkin, H. E., 88M/0607, 4301 Bell, C. M., 88M/6433 Bell, G. D., 88M/3840 Bell, H. E., 88M/0555 Bell, J. S., 88M/2999 Bell, J., 88M/5313 Bell, K., 88M/0719, 5667, 6212 Bell, L. C., 88M/5419 Bell, P. M., 88M/0432 Bell, R. T., 88M/1893, 2333, 6500 Bell, W. A., 88M/0047 Bella, S. Dominguez, 88M/2052 Bellanca, A., 88M/2379, 5578 Bellar, T. A., 88M/5941 Bellido, F., 88M/6170 Bellieni, G., 88M/4570, 5681 Bello, Ph. Lo, 88M/3209 Bellocq, J., 88M/4143, 5883 Bellon, H., 88M/3243, 4509 Bellotto, M., 88M/3322 Belmustakova, H., 88M/1165 Belokoneva, Ye. L., 88M/1820 Belonozhko, A. B., 88M/3693 Beloussov, V. V., 88M/1403 Belov. A. N., 88M/3708 Belviso, S., 88M/2393 Belyaev, A. M., 88M/3947 Belyanin, V. S., 88M/3752 Belzile, N., 88M/5689 Benavides, K. S., 88M/3772 Bencala, K. E., 88M/5842 Bencini, A., 88M/0081, 2218 Ben Dhia, H., 88M/4778 Ben-Dor, E., 88M/0154, 1762 Ben Hadj-Amara, A., 88M/3367 Benhassaine, A., 88M/0758 Benmore, R. A., 88M/3998 Benmoussa, L., 88M/2227 Benn, K., 88M/4615 Bennani, A., 88M/1887 Bennema, P., 88M/1835, 5429, 5430 Bennet, R., 88M/2420 Bennett, C. E. G., 88M/1044 Bennett, L. H., 88M/3278 Bennett, M. A., 88M/1141 Bennett, M. C., 88M/2815 Bennett, V. C., 88M/3252 Bennington, K. O., 88M/0555 Benoit, G., 88M/0831 Benoit, P. H., 88M/1669 Ben Othman, D., 88M/0482 Bente, K., 88M/0448 Bentley, H., 88M/3823 Bentley, M., 88M/4365 Benvenuti, M., 88M/1912 Beny, J. M., 88M/5090, 5605 Ben-Yaakov, S., 88M/2006 Beran, A., 88M/0261, 3123 Berelson, W. M., 88M/0837, 5843 Berendsen, P., 88M/0290, 2158 Berezovskaya, B. B., 88M/1919 Berg, C. M. G. Van den, 88M/ 0818, 1686, 2425, 4957

Berg, H. C., 88M/0034, 2480 Berg, J. H., 88M/2121 Berge, S. A., 88M/4287 Bergen, D. Von, 88M/1404 Berger, B. R., 88M/0892 Berger, E. T., 88M/2950 Berger, G., 88M/2003 Berger, G. W., 88M/3248 Berger, W. H., 88M/3978, 4106 Bergh, S. G., 88M/1229 Bergman, I. A., 88M/5584 Bergman, L., 88M/3045 Bergman, S. C., 88M/2789, 4426 Bergmann, S. C., 88M/2736 Berhe, S. M., 88M/0021 Berkeliyev, T. K., 88M/4036 Berkgaut, V. V., 88M/3408 Berkhovskiy, A. B., 88M/0694 Berkley, J. L., 88M/2529 Berman, R. G., 88M/0431, 0433, 3670 Berman, S. S., 88M/0082, 1687, 4949 Bermanec, V., 88M/6077 Bermudez-Polonio, J., 88M/ 1660 Bernard, A., 88M/4322 Bernard-Griffiths. 88M/ 4060, 5627 Bernardinelli, G., 88M/0237 Bernardini, G. P., 88M/2609 Bernasconi, A., 88M/2707 Bernat, M., 88M/0758, 3209, 4089 Bernatowicz, T. J., 88M/0509, 5969 Berne, S., 88M/3555 Berner, R. A., 88M/2284, 5548, 5549 Bernhardt, H.-J., 88M/0056 Bernstein, K.-H., 88M/4806 Bernstein, R. E., 88M/2397 Berrange, J. P., 88M/6306 Berrow, M. L., 88M/5035 Berry, R. F., 88M/2714 Bersani, A., 88M/0167 Berset, G., 88M/1840 Bershov, L. V., 88M/4766 Berthelin, J., 88M/2511 Berthon, J., 88M/3759 Bertine, K. K., 88M/0590 Bertolini, G. L., 88M/2220 Bertrand, H., 88M/0801, 6180 Bertrand, J., 88M/2211, 2554, 2942 Bertrand, J.-M., 88M/1253, 1620 Bertrand-Sarfati, J., 88M/4371 Berube, M.-A., 88M/1774 Beruto, D., 88M/5439 Berzero, A., 88M/5324 Beske-Diehl, S. J., 88M/6460 Beslier, M.N.-O., 88M/6284 Besnus, Y., 88M/3577 Besse, J., 88M/3133, 4575 Besson, G., 88M/3367, 3467 Best, M. G., 88M/2736, 6276

Besteiro, J., 88M/4284

Beswetherick, S., 88M/2768 Bethke, C. M., 88M/4675 Bethke, P. M., 88M/1048, 6084 Bettini, E., 88M/6145 Bettison, L. A., 88M/6032 Betton, P. J., 88M/0803 Betzer, P. R., 88M/2006, 2397 Betzl, M., 88M/1405 Beugnies, A., 88M/1469 Beukes, G. J., 88M/1075, 2555 Beukes, N. J., 88M/0347, 1587, 3085 Beus, A. A., 88M/5754 Beuzart, P., 88M/5640 Bevan, J. C., 88M/1278 Bever Donker, J. M. van, 88M/ 1167 Beveridge, T. J., 88M/2621, 5736 Bevins, R. E., 88M/3154, 4706, 6066, 6360 Beyer, I., 88M/2350 Beyer, R. P., 88M/0555 Beyth, M., 88M/1264, 1487, 1886 Beziat, D., 88M/6233 Bhat, A. N., 88M/4990 Bhat, M. I., 88M/3949 Bhattacharya, A., 88M/5456, 6008 Bhattacharya, D., 88M/4388 Bhattacharya, P. K., 88M/2572, 2750, 4296 Bhattacharyya, C., 88M/2695 Bhatti, N. A., 88M/2188 Bhosle, N. B., 88M/5917 Bialas, B., 88M/0543 Bialowolska, A., 88M/3405 Bianchi, L., 88M/0424 Bianchi, R., 88M/3507 Bibikova, Ye. V., 88M/0029 Bickle, M. J., 88M/1498, 4571, 4906 Biddy, D. M., 88M/0568 Bidoglio, G., 88M/1959 Bieler, D. B., 88M/4520 Bielicki, K.-H., 88M/0631 Bieniulis, M. Z., 88M/4771 Biermann, M., 88M/1938 Bigham, J. M., 88M/3358 Bik, Nguen Naok, 88M/1734 Bilal, E., 88M/1252 Bilinski, H., 88M/2018 Billington, W. G., 88M/5262 Billquist, P. J., 88M/0047 Billur, Z., 88M/3542 Bilt, G. P. van de, 88M/6326 Binda, P. L., 88M/1897 Bindea, G., 88M/4723 Bini, C., 88M/1759 Bin Ismail, Y., 88M/0887 Binks, P. J., 88M/5217 Binney, W. P., 88M/1927 Binns, R. A., 88M/5265, 6248 Binotto, C., 88M/1579, 3157. 4820 Binz, C. M., 88M/0811 Birau, O., 88M/3778 Birch, G., 88M/3998

Birch, W. D., 88M/4338, 4345, 6070, 6083, 6088, 6097 Birck, J.-L., 88M/4193 Bird, D. J., 88M/0880 Bird, D. K., 88M/0603, 6148 Bird, M. I., 88M/3239 Birke, M., 88M/5183 Birkenmajer, K., 88M/0017 Birkett, T., 88M/2273 Birsoy, R., 88M/4279 Biscaye, P. E., 88M/5691 Bischoff, A., 88M/2521 Bischoff, J. L., 88M/2021 Bischoff, W. D., 88M/0537 Bish, D. L., 88M/1359, 1798, 3328 Bishop, B. P., 88M/0603 Bishop, F. C., 88M/0537 Bishop, J. K. B., 88M/2400, 5690 Bisque, R. E., 88M/5929 Bjorklund, A., 88M/0595 Bjorklund, L. J. O., 88M/1131 Bjorseth, A., 88M/0848 Black, L. P., 88M/4510 Black, R., 88M/2798, 2799 Black, S. N., 88M/5136 Blackburn, M., 88M/4927 Blais, S., 88M/1231 Blake, D. F., 88M/5964 Blake, G., 88M/2375 Blake, S., 88M/4465 Blakemore, L. C., 88M/4978 Blakemore, R. P., 88M/1031 Blanc, F., 88M/2426 Blanc, G., 88M/5587 Blanchard, D. P., 88M/4437 Blasch, S. R., 88M/5541 Blasco, S. M., 88M/2670, 2956 Blasi, A., 88M/4275 Blasi, C. de P., 88M/4275 Blasi, G., 88M/4092 Blaszak, M., 88M/2977 Bleam, W. F., 88M/5109 Bleeker, W., 88M/1467 Blenkinsop, J., 88M/0719, 5667 Bless, M. J. M., 88M/3855, 3864, 4644 Bleuel, M., 88M/4808 Blevins, J. Y. K., 88M/3121 Blick, D. J., 88M/4112 Blockley, J. G., 88M/5597 Bloembergen, R., 88M/3714 Bloesch, P. M., 88M/5419 Blomeke, C., 88M/4807 Blonde, J. L., 88M/0204 Bloodworth, A. J., 88M/4630 Bloom, M. S., 88M/0625 Bloom, N. S., 88M/1982 Bloom, P. R., 88M/1751 Bloomer, S. H., 88M/4324. 4424, 5659 Bloss, F. D., 88M/0052, 1079, 1668 Blot, A., 88M/3612 Blough, N. V., 88M/4077 Blount, A. M., 88M/0395 Blum, A., 88M/3706 Blum, J. D., 88M/4221 Blusson, S. L., 88M/2494

Blyuman, B. A., 88M/2355 Boak, J. L., 88M/2582, 3032 Boatner, L. A., 88M/5444 Bobrow, D. J., 88M/6211 Bobylev, I. B., 88M/1990 Bocharov, V. L., 88M/2614, 5585 Bockstael, M. Van, 88M/5111 Boctor, N. Z., 88M/0670, 1260 Bodga, A., 88M/3402 Bodine Jr, M. W., 88M/0060, 3817 Bodinier, J.-L., 88M/0706, 2194, 2207 Bodnar, R. J., 88M/5538, 5540 Boehme, D. R., 88M/3300 Boelrijk, N. A. I. M., 88M/4612 Boettcher, A., 88M/5482 Bogaard, P., 88M/3216 Bogaard, P. v.d. 88M/6239 Bogard, D., 88M/0944 Bogard, D. D., 88M/4188 Bogatikov, O. A., 88M/1272, 2516, 4440 Bogda, A., 88M/3403 Bogdanoff, S., 88M/1876 Bogdanov, N. A., 88M/2267, 4584 Boggs, J. E., 88M/0227 Bogie, I., 88M/1459, 5184 Bogle, M. A., 88M/1981 Bogoch, R., 88M/2932, 2944 Boguslavskiy, S. G., 88M/2384 Boher, M., 88M/3676 Bohlen, S. R., 88M/2067 Bohme, R. C., 88M/1673 Bohmer, M., 88M/4171 Bohor, B. E., 88M/4238 Bohor, B. F., 88M/0965 Bohrson, W. A., 88M/1341 Boi, G., 88M/3157, 4820 Boillot, G., 88M/6284 Boinet, T., 88M/4852 Boisen Jr, M. B., 88M/5075, 5084 Boistelle, R., 88M/2055 Boivin, D. J., 88M/3166 Boivin, P., 88M/5554 Bojadjiev, S., 88M/0615, 1250 Bojadzieva, R., 88M/0633, 0717 Bokiy, T. B., 88M/2559 Boldyreva, M. M., 88M/4770 Boles, J. S., 88M/4120 Bolivar, S. L., 88M/0890 Bolognesi, L., 88M/2219 Boltin, W. R., 88M/6140 Bome, F., 88M/5801 Bonanno, V., 88M/5972 Bonar-Sharpless, N., 88M/2923 Bonazzi, P., 88M/3495 Bond, A. M., 88M/1685 Bone, Y., 88M/3906 Bonetto, R. D., 88M/3378 Bonham-Carter, G. F., 88M/ 0915

Bonhomme, M. G., 88M/3985,

3993, 4685, 4872

Bonnar, R., 88M/1928

Bonin, B., 88M/1237, 2885

Bonnaud, P., 88M/0190 Bonnemaison, M., 88M/3528 Bonnet, B., 88M/4550 Bonnett, P. J. P., 88M/5318 Bonneville, A., 88M/4576, 6244 Bonnin, D., 88M/0113 Bonorino, F. Gonzalez, 88M/ 2708 Boon, J. J., 88M/4123 Boon Goh, Tee, 88M/0502 Borch, R. S., 88M/4760 Borchardt, B., 88M/4869, 4870 Borcsik, M., 88M/0495 Boreham, C. J., 88M/4127 Borevsky, L. V., 88M/2389 Borg, G., 88M/6122 Borg, S. G., 88M/2866 Borggaard, O. K., 88M/0136 Borgia, A., 88M/1368, 4601, 6279 Borisov, A. A., 88M/2200 Borisov, M. V., 88M/5747 Borisova, S. L., 88M/0707, 3899 Borkowski, J., 88M/3402 Bornhold, B. D., 88M/6338 Bornhorst, T. J., 88M/0737, 2509, 2922 Borodaev, Yu. S., 88M/4319, 4320 Borodin, L. S., 88M/0690 Borole, D. V., 88M/3229 Boronikhin, V. A., 88M/1454, 3092, 6403 Boroznovskaya, N. N., 88M/ 1514 Borradaile, G., 88M/3130 Borre, D., 88M/1975 Borroni, P. A., 88M/5324 Borschevski, Y. A., 88M/0707 Borschevskii, Yu. A., 88M/3899 Borsdorf, R., 88M/0588 Borsuk, A. M., 88M/0730, 2234, 5647 Bortnikov, N. S., 88M/1062 Bos, A., 88M/0602, 3734, 4271, 5472 Boscardin, M., 88M/1578 Bosch, A., 88M/5794, 5905 Bose, U., 88M/6245 Bosetto, M., 88M/3394 Boshvarov, V. I., 88M/3942 Bosse, J. Y. van, 88M/4752 Bosse, P., 88M/4808 Bossiere, G., 88M/6388 Bostrom, D., 88M/1791 Bostrom, K., 88M/5809 Both, R. A., 88M/5595 Botha, B. J. V., 88M/1261, 2555 Bothwick, J., 88M/4930 Botoman, G., 88M/5740 Botova, M. M., 88M/1019 Bottger, T., 88M/2350 Bottinga, Y., 88M/2002 Bottomley, D. J., 88M/1973 88M/1904, Bottrell, S. H., 3923, 6357 Botz, R., 88M/4023 Bouchard, M., 88M/0867

Bouchardon, J.-L., 88M/6390 Bouchertall, F., 88M/1954 Bouchet, A., 88M/0164, 3356, 5016 Bouckaert, J., 88M/4035 Boudeuile, M., 88M/0702, 5032, 6400 Boudier, F., 88M/6376 Boudon, G., 88M/2929 Boudreau, A. E., 88M/0389, Boudreau, B. F., 88M/0815 Boudreau, B. P., 88M/6308 Boudreau, M., 88M/1182 Bougault, H., 88M/5527, 5621, 5640 Boulegue, J., 88M/0775, 5587, 5834 Boullier, A.-M., 88M/6407 Boulmier, S., 88M/1223 Boulogne, B., 88M/5395, 5443 Boulter, C. A., 88M/1498 Boulter, M. C., 88M/2966 Bourbeau, G. A., 88M/4927 Bourg, A. C. M., 88M/4087 Bourgois, J., 88M/4852 Bourguignon, P., 88M/4126 Bourman, R. P., 88M/2993 Bourne, J., 88M/6215 Bourot-Denise, M., 88M/0943 Boussuge, C., 88M/5884 Boust, D., 88M/5704 Bowden, D. J., 88M/2302 Bowden, P., 88M/2798 Bowen, A. N., 88M/4607 Bowers, T. S., 88M/3810 Bowes, D. R., 88M/3046 Bowker, A. M., 88M/4786 Bowling, R. A., 88M/4920 Bowring, S. A., 88M/0678 Boyarskaya, R. V., 88M/2853, 3521 Boyce, A., 88M/5581 Boyce, A. J., 88M/3991, 3998 Boyd, D. M., 88M/6198 Boyd, F. R., 88M/1208, 2752, 2759, 2760, 2767, 2769 Boyd, S. R., 88M/3851, 3852 Boyer, B. W., 88M/3313 Boyle, E., 88M/4091 Boyle, E. A., 88M/4071, 4115, 4146, 5946 Boyle, J. R., 88M/4948 Boyle, R. W., 88M/0313 Boynukalin, S., 88M/4482 Bozesan, C., 88M/6178 Bozkov, I., 88M/0030 Bracamontes, Munguia, 88M/0838 Bracci, G., 88M/3155 Bracewell, J. M., 88M/0849 Brach, M., 88M/3291, 4084 Bradbury, J. P., 88M/2923 Bradbury, J. R., 88M/1685 Bradinskaya, Ye. M., 88M/0348 Bradley, J. P., 88M/5977 Bradshaw, A. L., 88M/5774 Bradshaw, J. Y., 88M/5757 Bradshaw, M. A., 88M/6262

Bradshaw, P. M. D., 88M/0104 Bradshaw, R. J., 88M/1178 Brady, J. B., 88M/0436 Bragg, A., 88M/4184 Braide, S. P., 88M/0177 Braithwaite, R. S. W., 88M/ 1041, 1563, 2651, 6078, 6470 Brajnik, D., 88M/5312 Brake, S., 88M/3912 Brakke, D. F., 88M/2371 Bralower, T. J., 88M/0844 Braman, D. R., 88M/3001 Brand, E., 88M/0782 Brand, N., 88M/0782 Brand, P., 88M/5536 Brand, U., 88M/0782, 0790, 6350 Brandeis, G., 88M/0474, 1206 Brandle, J. L., 88M/5366 Brandriss, M., 88M/5121 Brandt, E. L. M., 88M/6027, 6028 Brandt, J. C., 88M/5993 Branica, M., 88M/2018, 3283, 3629, 3630 Branigan, N., 88M/2820 Brantley, S. L., 88M/4601 Brassell, S. C., 88M/0851, 2422, 4118, 5910 Brat, S., 88M/5327 Brault, M., 88M/2440, 5884 Brearley, A. J., 88M/1994, 2072, 6386 Brearley, M., 88M/2754, 2773, 2872 Breemen, A. van, 88M/0602 Breemen, O. van, 88M/0037, 1641 Breen, C., 88M/0117, 0118, 1727, 1728, 4974 Breheret, J.-G., 88M/6076 Breiter, K., 88M/2157 Breitkopf, J. H., 88M/5199 Bremaecker, J. Cl. De, 88M/ 1593 Brenan, J. M., 88M/3674 Brennan, M. J., 88M/0417 Brenner, T. L., 88M/5933 Brenninkmeijer, C. A. M .. 88M/4070 Bres, E. F., 88M/0239 Bretzlaff, R. E., 88M/1894 Breuer, G., 88M/3127 Breuer, K.-H., 88M/5104, 5105 Breval, E., 88M/2069 Brew, D. A., 88M/2877, 3027 Brewer, P. G., 88M/5774 Brey, G., 88M/5397 Brichard, P. J., 88M/3545 Brichet, E., 88M/3984 Briddle, A. J., 88M/4337 Bridges, T. F., 88M/1559, 4804 Bridgewater, D., 88M/3033 Bridgwater, D., 88M/1120. 2811, 3030, 3199, 4759 Brigatti, M. F., 88M/0112, 3347, 4267 Brigham, R. H., 88M/0748 Brimblecombe, P., 88M/0401

Brimhall, G. H., 88M/1294, Brimhall Jr, G. H., 88M/3514, Brinkhuis, H., 88M/5903 Briot, D., 88M/5554 Brique, L., 88M/1223 Brisson, H., 88M/4512 Bristow, A. W., 88M/0199 Brizzi, G., 88M/2650 Broadhurst, J. R., 88M/1125 Broadus, J. M., 88M/0302 Brock, J. C., 88M/6261 Brockamp, O., 88M/6363 Brockerhoff, F. G., 88M/4668 Brodie, J. E., 88M/0829 Brodie, K. H., 88M/1985, 6465 Broecker, W. S., 88M/5343 Bromley, C. J., 88M/1331 Brook, M., 88M/0045 Brooker, D. D., 88M/0390 Brookes, C., 88M/3714 Brookins, D. G., 88M/5384 Brookmyer, B., 88M/1061 Brooks, J., 88M/4967 Brooks, J. M., 88M/0861, 2455, 4114 Brooks, R. R., 88M/0913, 2478, 2539, 4175, 5967, 6131 Brophy, J. G., 88M/6206 Broska, I., 88M/4695 Brothers, R. N., 88M/6132, 6265 Brotzu, P., 88M/0014, 6223 Brouand, M., 88M/3933 Broughton, R. D., 88M/4738 Brousse, R., 88M/4550 Broustet, J.-M., 88M/4514 Brouwers, E. M., 88M/3170 Brouxel, M., 88M/3975 Brown, C. E., 88M/2704 Brown, F., 88M/2497 Brown, F. W., 88M/1662 Brown, G. C., 88M/0627 Brown, I. D., 88M/5077 Brown, I. J., 88M/0647, 2177, 5291 Brown, I. W. M., 88M/5126 Brown, J. R., 88M/0668 Brown, K., 88M/3754 Brown, K. W. M., 88M/0200 Brown, L., 88M/3983, 5522 Brown, M. J., 88M/0397 Brown, P. E., 88M/0183, 1189, 1504, 5622, 5746 Brown, R. M., 88M/2185, 4956 Brown, R. R., 88M/0555 Brown, S. B., 88M/1781 Brown, T. H., 88M/0431, 0433, 1986, 3670 Brown, W. L., 88M/6039, 6147 Brown, Z. A., 88M/6084 Brown Jr, G. E., 88M/3299, 3461, 5080 Brown Jr, J. F., 88M/0417 Brown, Z. A., 88M/2497 Browne, G. H., 88M/4665 Browning, T. D., 88M/6460 Brownlee, D. E., 88M/5953, 5983

Broxton, D. E., 88M/1359 Bruckert, S., 88M/0204 Bruckmann-Benke, P., 5415 Brueckner, H. K., 88M/1182 Bruemmer, G. W., 88M/5420 Brugmann, G. E., 88M/2272 Brugmann, L., 88M/1681, 5693 Bruiyn, H. de, 88M/1261, 2555 Brula, P., 88M/2461 Bruland, K. W., 88M/4891 Brummer, J. J., 88M/0866 Brumos-Albero, R., 88M/4303 Brun, J.-P., 88M/2713, 2726 Brundin, N. H., 88M/2460 Bruno, J., 88M/4080 Brunskill, G. J., 88M/5339 Brunton, G. D., 88M/4976 Bruun-Petersen, J., 88M/2372 Bryan, W. B., 88M/0459 Brynard, H. J., 88M/5175 Bryndzia, L. T., 88M/2073, 3763, 5416 Bryzgalin, O. V., 88M/3697 Buatier, M., 88M/4713 Bublikova, T. M., 88M/5516 Bubnov, S. N., 88M/4440 Buchan, K. L., 88M/3137, 6459 Buchanan, D. L., 88M/4968 Buchardt, B., 88M/5699 Bucher-Nurminen, K., 88M/0558 Buchs, A., 88M/0840, 0841 Buckley, D. E., 88M/3416 Buckmaster, H. A., 88M/1739 Buczynski, C., 88M/3007 Budai, J. M., 88M/0789 Budde, W. L., 88M/5941 Budding, K. E., 88M/6277 Budek, L., 88M/0159, 0175, 0193 Budzinski, H., 88M/0716 Bueno, E., 88M/5865 Bueno De Camargo, M., 88M/ 6437 Buesseler, K. O., 88M/1952, 1953 Buffle, J., 88M/0086 Buhler, Ch., 88M/2617 Buhmann, D., 88M/5437 Bukhtiyarov, P. G., 88M/5370 Bukowinski, M. S. T., 88M/5132 Bulatov, V. K., 88M/5465 Buletti, M., 88M/0709 Bull, S., 88M/6250 Bullett, D. W., 88M/5076 Bullock, S. J., 88M/6181 Bunch, T. E., 88M/5964 Bungum, H., 88M/1591 Buntin, T. J., 88M/4414 Burau, R. G., 88M/5422 Burbank, B. B., 88M/4830 Burchart, J., 88M/1618 Burden, R. J., 88M/5335 Burg, J. P., 88M/1497, 2713, 4710 Burger, A. J., 88M/1624, 4894 Burgess, D. D., 88M/4941 Burghele, A., 88M/3185 Burgman, J. O., 88M/5879

Burke, E. A. J., 88M/4338, 6067 Burke, T. M., 88M/1029 Burkhard, D. J. M., 88M/1911 Burkhardt, R., 88M/0905 Burkov, V. V., 88M/1076 Burkova, V. N., 88M/4122 Burlington, J. L., 88M/0319 Burmistrova, V. V., 88M/0638 Burne, R. V., 88M/5723 Burnell, J. R., 88M/4531 Burnett, R., 88M/5013 Burnett, R. D., 88M/2962 Burnett, W. C., 88M/5303 Burnham, C. W., 88M/0260, 0480, 1798, 5107 Burnol, L., 88M/3935 Burns, K. G., 88M/6181 Burova, T. A., 88M/2127, 2149 Burri, G., 88M/2665 Burridge, J. C., 88M/0200 Burrus, D., 88M/1958 Burt, D. M., 88M/0972, 0978 Burtner, R. L., 88M/3988 Burton, B. P., 88M/0251, 0539 Burton, J. D., 88M/4101, 5845 Burton, J. H., 88M/0187 Buryakovskiy, L. A., 88M/0179 Busby-Spera, C. J., 88M/4603 Buscher, R., 88M/5082 Buseck, P. R., 88M/0988, 3450, 6035, 6045 Busenberg, E., 88M/0541 Bushell, C. L., 88M/0053 Bushmakin, A. F., 88M/1094, 4336, 4339 Bushman, S. A., 88M/4690 Bussell, G. D., 88M/1543 Bussetti, S. G. de, 88M/4989 Bustillo, M., 88M/2973, 6325 Bustillo, M. A., 88M/2973 Bustin, R. M., 88M/4047 Butcher, A. R., 88M/1232, 2615 Butcher, N. J. D., 88M/1931 Butler, A. C., 88M/2428 Butler, J. R., 88M/1289 Butler, R. W. H., 88M/6100 Butt, C. R. M., 88M/5179 Butt, K. A., 88M/2611 Butts, J.-L., 88M/4182 Butulashvili, T. L., 88M/0376 Buurman, P., 88M/0130, 5031 Buyukonal, G., 88M/3940 Bylund, G., 88M/6457 Byrne, R. H., 88M/2006, 2397 Caballero, E., 88M/3354 Caballero, M. A., 88M/5147 Cabanis, B., 88M/0701, 2206, 6233 Cabaniss, S. E., 88M/4161, 4162

Cabella, R., 88M/0986 Cabidoche, Y .- M., 88M/3421 Caboi, R., 88M/2123 Cabral Cano, E., 88M/4857 Cabrera, M. P., 88M/6236

Cabri, L. J., 88M/0282 Caby, R., 88M/0022, 4371. 4872 Cacho, L. Garcia, 88M/0707 Cadel, G., 88M/2217 Cadet, J.-P., 88M/1172 Cadoppi, P., 88M/4610 Caen-Vachette, M., 88M/0023, 3221, 3222 Cagatay, M. N., 88M/1917 Cai, C., 88M/2862 Cai, D.-L., 88M/4167 Cai, W., 88M/2024 Caillier, M., 88M/4927 Caillot, A., 88M/5321 Caine, P. M., 88M/5021 Cairneross, B., 88M/1422 Cairns-Smith, A. G., 88M/0091 Caironi, V., 88M/2832 Caisso, M., 88M/2381 Calanchi, N., 88M/2939 Calas. G., 88M/0605, 5080 Calderoni, G., 88M/2154, 3863, 5700 Caldwell, W. G. E., 88M/0784 Calhoun, J., 88M/0590 Callahan, E. J., 88M/0806 Callender, E., 88M/5340 Calles, B., 88M/5879 Callot, G., 88M/0508 Callot, H. J., 88M/2446 Calmano, W., 88M/3372 Calon, T. J., 88M/4728 Calsteren, P. Van, 88M/0591, 3017 Calsteren, P. W. C. van, 88M/ 1126, 2767 Calvert, L. D., 88M/3341 Calvert, S. E., 88M/2327, 5599, 5906 Calvez, J .- Y., 88M/5640 Calvin, J. S., 88M/5237 Calvo, R., 88M/5031 Camargo, M. Bueno De, 88M/ 6437 Cambel, B., 88M/1618 Cameron, A., 88M/1677 Cameron, A. R., 88M/3000, 4045 Cameron, B. E. B., 88M/3005 Cameron, C. C., 88M/1977 Cameron, D. G., 88M/4924 Cameron, E. E., 88M/4571 Cameron, E. M., 88M/0869, 3994, 5563 Cameron, G., 88M/1195 Cameron, I. B., 88M/4468 Cameron, J., 88M/1736 Cameron, K. L., 88M/0750 Cameron, M., 88M/0750 Cameron, R. S., 88M/2483 Camm, G. S., 88M/6049 Campana, C. F., 88M/0266, Campa-Vineta, J. A., 88M/ 5425, 5433, 5434, 5570, 6064 Campbell, A. C., 88M/4050 Campbell, A. D., 88M/4932

Campbell, D. B., 88M/4208 Campbell, D. R., 88M/2636 Campbell, E. M., 88M/1781 Campbell, F. A., 88M/3996 Campbell, G. D., 88M/4998 Campbell, I. B., 88M/1329, 5046 Campbell, I. H., 88M/1185, 5770 Campbell, S. D. G., 88M/1151, 2894, 2895 Campbell, T. J., 88M/2636, 2654, 2664 Campelo, J., 88M/0114 Camus, G., 88M/2908 Cancer Loma, G., 88M/1241 Candela, P. A., 88M/1029 Canepa, J. A., 88M/4940 Canil, D., 88M/0741, 2872 Cann, J. R., 88M/2159, 5635 Canneym, F. C., 88M/0918 Cano, E. Cabral, 88M/4857 Can'o, F., 88M/4695 Cantagrel, J. M., 88M/3211 Cao, J., 88M/1518 Cao, R.-L., 88M/2746 Capaccioni, B., 88M/0712, 4541 Capaldi, G., 88M/1316 Capdevila, R., 88M/3034 Capelle, B., 88M/1080 Capen, C., 88M/4197 Capitani, C. de, 88M/1986 Capitani, L. De, 88M/2212, 2214 Capobianco, 88M/0538, C., 0540 Capote, R., 88M/6116 Cappetta, H., 88M/2304, 5817 Capus, G., 88M/2152 Car, D., 88M/0888 Carames, M., 88M/6327 Carames Lorite, M., 88M/5322 Carballo, A. M., 88M/1735 Carbonin, S., 88M/3491 Carcangiu, G., 88M/2463 Card, K. D., 88M/1648, 3137, 6211 Cardile, C. M., 0147, 3364, 5126 88M/0145, Cardoso Fonesca, E., 88M/2462 Carel, C., 88M/3493 Carignan, R., 88M/5734 Carl, C., 88M/2300 Carl, Cl., 88M/3217 Carlisle, V. W., 88M/1778, 3431, 5062 88M/0652, Carlo, E. H. De, 3880 Carlson, C. W., 88M/0960 Carlson, E. H., 88M/0407, 3006 Carlson, L., 88M/0162, 1033 Carlson, R. M., 88M/1721 Carlson, R. R., 88M/0359, 1020 Carlson, R. W., 88M/0679, 0742, 3787 Carlson, R., 88M/5742

Carlson, W. D., 88M/5463,

5464

Carman, M. F., 88M/1377 Carman Jr, M. F., 88M/0693 Carme, F., 88M/0705, 6283 Carmichael, D. C., 88M/5025 Carmichael, D. M., 88M/3797 Carmichael, I. S. E., 88M/0524, 3345, 3672, 3687, 3690, 5127 Carnahan, J. C., 88M/0417 Caron, J. M., 88M/1477, 1478 Caron, J. P., 88M/4494 Caron, J. P.-H., 88M/4572 Carothers, W. W., 88M/0745, 5788 Carozzi, A. V., 88M/1404, 4671 Carpena, J., 88M/0974, 3253 Carpenter, F. O., 88M/4762 Carpenter, M. S. N., 88M/5704 Carpenter, R., 88M/0405, 0416, 4154 Carr, M. J., 88M/2918, 2925, 2926, 6279 Carr, R. H., 88M/5968 Carr, R. M., 88M/3353 Carr, S. W., 88M/1814 Carras, S. N., 88M/5189 Carriere, D., 88M/6346 Carriere, J. J., 88M/1894 Carswell, D. A., 88M/0103, 1116, 6183 Carter, B. J., 88M/3429 Carter, L. D., 88M/3170 Carter, L., 88M/1433, 6343 Carter, R. M., 88M/1433 Cartwright, I., 88M/1468, 4703, 3052 Cartz, L., 88M/1512 Caruba, R., 88M/2542 J. Tavares Carvalho, Freitas, 88M/1860 Carver, R. N., 88M/0875 Carvoeiras Goinhas, 88M/3533 Cas, R. A. F., 88M/6250 Casa, C. G. De, 88M/1576, 4819 Casadevall, J. R., 88M/1345 Casadevall, T. J., 88M/1338, 1339, 1345 Casado, J. M. Gonzalez, 88M/ 6116 Casagrande, D. J., 88M/2404 Casa Martinez, C. de la, 88M/ 6485 Casal Moura, E., 88M/5017 Casas, J. M., 88M/2722, 3529 Casertano, L., 88M/1368 Casey, W. H., 88M/0786 Cashion, J. D., 88M/1432 Cashman, K. V., 88M/6274 Casquet, C., 88M/1607, 6116 Casquet Martin, C., 88M/0340 Cassedanne, J., 88M/5500 Cassedanne, J. O., 88M/4335 Cassedanne, J. P., 88M/0579, 2618, 4335 Castillo, A., 88M/0166 Castillo, P., 88M/2953 Castro, A., 88M/4450

Castro, C. A. Nieto de, 88M/ 3716 Castro Reis, M. de L. P., 88M/4926 Catalan, J. R. Martinez, 88M/ 6170 Catchpole, S. J., 88M/0370 Catena, E. Vindel, 88M/0342 Cater, J. M. L., 88M/2971 Cathelineau, M., 88M/1364, 3890 Cathles, L. M., 88M/5797 Catlow, C. R. A., 88M/5407 Cattell, A., 88M/2914, 5668 Catti, M., 88M/5092 Cauet, S., 88M/3854, 4015 Cauwet, G., 88M/3980 Cavarretta, G., 88M/1452 Cavazzini, G., 88M/3186 Cave, M. R., 88M/0489, 3673 Cawood, P. A., 88M/0684 Cawthorn, R. G., 88M/2231, 2847 Charnley, N. R., 88M/4246 Caye, R., 88M/6063 Cech, I., 88M/3624 Cejka, J., 88M/2648 Cejka Jr, J., 88M/2648 Celebonovic, V., 88M/4209 Celenk, O., 88M/2474 Celico, P., 88M/0824 Cellini-Legittimo, P., 88M/6238 Censi, P., 88M/2143, 5571 Ceraghmakani, M., 88M/5448 Cerny, P., 88M/1042, 1084, 1095, 1812, 1836, 4344 Cervelle, B., 88M/6063 Cesbron, F., 88M/6063, 6086 Cesbron, F. P., 88M/2641, 4342 Cessar, L. R., 88M/3633 Chadwick, O. A., 88M/3427, 3428 Chafetz, H. S., 88M/3007 Chaffee, A. L., 88M/2417 Chaffee, M. A., 88M/2487 Chaikum, N., 88M/3353 Chakaveh, S. C., 88M/5989 Chakoumakos, B. C., 88M/0975, 3122 Chakraborty, K. L., 88M/6054 Chakraborty, S., 88M/4385 Chakravorty, P. S., 88M/4901 Challer, M., 88M/6165 Chalokwu, C. I., 88M/1291 Chalov, P. I., 88M/2367, 4099 Chamberlain, C. P., 88M/6425 Chambers, A. D., 88M/1189 Chambers, L. A., 88M/5723 Chamley, H., 88M/4655 Champion, D. E., 88M/1540 Champness, P. E., 88M/2060 Chan, L. H., 88M/4079, 5815 Chanda, S. K., 88M/4656 Chandler, F. W., 88M/1642 Chandler, R. J., 88M/3418 Chandra, H., 88M/5885 Chang, C. P., 88M/2024 Chang, L. L. Y., 88M/2046 Chang, S., 88M/2525, 5964 Chang, S.-B. R., 88M/1541

Chang, S. G., 88M/0403 Chang, Y .- H., 88M/0560 Changkakoti, A., 88M/0660, 2187, 5537 Chanton, J. P., 88M/0414, 0415 Chao, E. C. T., 88M/0262 Chao, T. T., 88M/3758 Chapelain, J. R. le, 88M/1876 Chapelle, J.-P., 88M/2059 Chapin, S., 88M/3176 Chapman, R., 88M/1812 Chappell, B. W., 88M/2866, 3918, 4773, 5676, 6199, 6202, 6203 Charalampides, G., 88M/3747 Charles, R. W., 88M/3913 Charlesworth, H. A. K., 88M/ 0061 Charlet, J.-M., 88M/0903, 2151, 3873, 4016 Charlou, J. L., 88M/5527 Charnock, J. M., 88M/5149 Charoy, B., 88M/3676, 3883, 4269 Chartres, C. J., 88M/0181, 0196 Charvet, J., 88M/2696, 6305 Chase, R. L., 88M/1399 Chassefiere, B., 88M/4089 Chatterjee, N., 88M/1991 Chatterjee, N. D., 88M/5360, 5415 Chattopadhyay, G., 88M/2572, 4296 Chaudhari, M. W., 88M/5745 Chaudhary, M. A., 88M/1865 Chaudhri, N., 88M/6188 Chaudhuri, A. K., 88M/4656 Chaudhuri, K., 88M/2695 Chauris, L., 88M/3575, 6323 Chauvel, C., 88M/4571, 4907 Chavadi, V. C., 88M/6336 Chave, K. E., 88M/5831, 5837 Chaves, R., 88M/3565 Chaye d'Albissin, M., 88M/3099 Chayes, F., 88M/2266 Chazin, B., 88M/4179 Cheadle, M., 88M/4571 Cheary, R. W., 88M/0271 Checchi, F., 88M/3156 Cheeseman, P. A., 88M/5081 Cheilletz, A., 88M/5751 Chelishchev, N. F., 88M/2852, 4545 Chelishev, N. F., 88M/0435 Cheminee, J.-L., 88M/0722 Cheminee, J.-P., 88M/0651 Chen, C., 88M/2241, 2862 Chen, C. C., 88M/0526 Chen, C.-H., 88M/5721 Chen, D., 88M/5910, 6194 Chen, H., 88M/2168 Chen, J. H., 88M/0048, 0749 Chen, R., 88M/6033 Chen, S., 88M/4502, 6246 Chen, T. T., 88M/0282, 2631 Chen, X., 88M/1551, 5256

Chen, Y., 88M/0032, 0351, Chow, H. J., 88M/0131 2862, 3597 Chen, Z., 88M/0085, 3634 Chenevoy, M., 88M/3056 Cheng, Q., 88M/4502 Chenoweth, L. M., 88M/0875 Chen Wang, Ru, 88M/4289 Cherenkov, V. G., 88M/4740 Cherenkova, A. F., 88M/4740 Cherepivskaya, G. E., 88M/ 1090 Cherkashin, V. I., 88M/1066, 4346 Cherneva, Z., 88M/2129 Chernyshev, I. V., 88M/4899, 5647, 5648 Chervyakovskii, G. F., 88M/ 1266 Chesheyko, A. M., 88M/4036 Cheshko, A. L., 88M/0827 Chesnokov, B. V., 88M/4336, 4339 Chesser, S. L., 88M/5062 Chester, D. K., 88M/2897 Chester, F. M., 88M/2720 Chester, R., 88M/5691 Chesworth, W., 88M/1932 Chevalier, L., 88M/4590 Chevalier, Y., 88M/0197 Chevallier, L., 88M/2902 Chevremont, P., 88M/1226 Chi, S .- J., 88M/3554 Chiang, S., 88M/1690 Chiba, H., 88M/1999 Chicarelli, M. I., 88M/2432 Chichinadze, G. L., 88M/1490 Chiesa, S., 88M/1316 Chijiwa, K., 88M/2992 Child, C. W., 88M/4041 Childs, C. W., 88M/0256, 5060 Chipera, S. J., 88M/6420 Chisholm, J. E., 88M/1081, 5113 Chistilin, P. E., 88M/0292 Chitale, D. V., 88M/0195 Chittleborough, D. J., 88M/ 5042 Chivas, A. R., 88M/3239, 3918 Chivira, E., 88M/3732 Chmielova, M., 88M/0264 Chmura, G. L., 88M/4160 Cho, M., 88M/2088, 4677 Chodak, T., 88M/3402, 3403, 5326 Chodyniecka, L., 88M/2646 Choi, D. R., 88M/3175 Choma-Moryl, K., 88M/0158 Chon, H. T., 88M/1050 Choo, L. K., 88M/5355 Chopin, C., 88M/1213, 3060 Choquette, M., 88M/1774 Chorlton, L. B., 88M/1644 Chotin, P., 88M/4509, 4852, 6267 Chou, I.-M., 88M/0427, 0500 Choudhuri, A., 88M/0812 Chough, S. K., 88M/1435 Choukroune, P., 88M/2710, 2721

Chown, E. H., 88M/0317, 0984 Christensen, H., 88M/5605 Christensen, P. A., 88M/1684 Christensen, T. H., 88M/1722, 1723, 5036 Christian, B. S., 88M/2663 Christian, R. P., 88M/0663 Christiansen, F. G., 88M/3592 Christodoulou, A., 88M/6463 Christoffersen, J., 88M/5442, 6446 Christoffersen, M. R., 88M/ 5442 Christophe-Michel-Levy, 88M/0943 Christy, A. A., 88M/0848 Chroston, P. N., 88M/6113 Chrysikopoulos, C. V., 88M/ Chryssoulis, S. L., 88M/3523 Chu, H., 88M/0754 Chu, H .- T., 88M/5139 Chu, T., 88M/2242 Chukhrov, F. V., 88M/0270, 1919, 2616 Chung, C. F., 88M/2508 Chung, Y., 88M/5815, 5820, 5821 Church, M. R., 88M/4112 Church, S. E.; 88M/0921, 2490 Church, T. M., 88M/5841 Church, W. R., 88M/2955, 6270 Churchman, G. J., 88M/5049 Churchur, P. L., 88M/0080 Cicel, B., 88M/3360 Cigolini, C., 88M/1367, 1368, 3565 Cilliers, F. H., 88M/0374 Cimbalnikova, A., 88M/0931 Cini, R., 88M/4119 Cioni, R., 88M/6238 Cipriani, C., 88M/2609 Circone, S., 88M/2071 Cirodde, J. L., 88M/1876 Cisowski, S. M., 88M/5950, 5976, 6312 Ciuhandu, A., 88M/3778 Civetta, L., 88M/4552 Claesson, L.-A., 88M/0005, 1135 Claesson, S., 88M/2683, 4876, 4877 Clague, D., 88M/4592 Clague, D. A., 88M/0736, 1332, 1334, 1335, 1341, 2791 Clague, J. J., 88M/6272 Claridge, G. G. C., 88M/5044 Clark, A. H., 88M/0046, 0394 Clark, D. L., 88M/0755 Clark, G. H., 88M/5263 Clark, I. D., 88M/5857 Clark, L. A., 88M/0868 Clark, P. E., 88M/4189 Clark, R. J. McH., 88M/1928 Clark, R. K., 88M/3271 Clark, S., 88M/1221 Clarke, B. A., 88M/0051 Clarke, D. S., 88M/5269

Clarke, G. L., 88M/1497 Clarke, I., 88M/5221 Clarke, N. W. H., 88M/4137 Clarke, W. B., 88M/2122, 3955 Clarkson, G., 88M/1461, 4539 Claros, J., 88M/2486 Clauer, N., 88M/0010, 1621, 3245, 3827 Clausen, H. B., 88M/0018 Claverol, M. Gutierrez, 88M/ 1765 Clayden, B., 88M/0203 Clayton, C. G., 88M/1698 Clayton, J. L., 88M/2448, 4158 Clayton, · R. N., 88M/5533, 5947, 5957, 5971 88M/2071, Clemens, J. D., 3650 Clemens, W. A., 88M/3170 Clement, G. P., 88M/5706 Cleverly, W. H., 88M/2537 Clichici, O., 88M/6364 Clifford, B. A., 88M/5278. 6250 Cloarec, M.-F. Le, 88M/3917 Clocchiatti, R., 88M/1248, 4439, 6237 Closs, L. G., 88M/2488 Cloud, P., 88M/3182 Clube, S. V. M., 88M/5992 Cnudde, C., 88M/4014 Coban, F., 88M/3407 Cobarzan, A., 88M/6364 Cobbold, P. R., 88M/2709, 2721 Cocco, E., 88M/1579, 4820 Cocherie, A., 88M/4027 Cochran, J. K., 88M/0779, 1951 Cocirta, C., 88M/4475 Cockayne, D. J. G., 88M/1771 Cody, A. M., 88M/5447 Cody, R. D., 88M/5447 Coen-Aubert, M., 88M/4014 Coetzee, J., 88M/1262 Cogels, F.-X., 88M/4097 Cohen, A. D., 88M/1977, 2405 Cohen, A. S., 88M/4873 Cohen, D. R., 88M/0917 Cohen, R. E., 88M/4763, 4769 Cohen, S., 88M/0239 Coish, R. A., 88M/2275 Coker, R. D., 88M/1963 Coker, W. B., 88M/0880, 0885 Colbeck, S. C., 88M/2031 Cole, D. R., 88M/0796 Cole, G. A., 88M/4156 Cole, G. H. A., 88M/4198 Cole, G. P., 88M/4427 Cole, J. J., 88M/0865 Cole, J. W., 88M/6259 Colella, R., 88M/1786 Coleman, M. L., 88M/3998 Coleman, R. G., 88M/6374 Collela, C., 88M/5486 Collerson, K. D., 88M/1120 Colley, H., 88M/3876, 5243 Collier, K. J., 88M/5909 Collier, R. W., 88M/4109

Collini, B., 88M/1010 Collins, A. R., 88M/5930 Collinson, D. W., 88M/2523 Collomb, P., 88M/6391 Collyer, S., 88M/5137 Colman-Sadd, S. P., 88M/3178 Colombi, A., 88M/3070 Colson, R. O., 88M/3721 Coltelli, M., 88M/3254 Colucci, M. T., 88M/0751 Colwell, J. A., 88M/6208 Comans, R. N. J., 88M/2051 Combes, J. M., 88M/5143 Combredet, N., 88M/2133 Comet, P. A., 88M/5891 Comin-Chiaramonti, P., 88M/ 5681 Commeau, J. A., 88M/1662 Commeau, R. F., 88M/1662, 2339 Compagnoni, R., 88M/6037 Compston, W., 88M/0954, 2276, 3199, 3225, 4889, 4902, 4905 Compton, R. G., 88M/3764 Comsti, E. C., 88M/5283 Condie, K. C., 88M/0669, 0746, 2307, 3946, 6211, 6429 Condliffe, E., 88M/2230, 2613, 2776 Condomines, 88M/3211, M., 5624 Conforto, L., 88M/0766 Cong, B., 88M/4742 Coniglio, M., 88M/2996 Conil, R., 88M/4642 Connan, J., 88M/2449, 4130, 4133 Connare, K. M., 88M/1647 Connor, C. B., 88M/2919 Conrad, G., 88M/1586 Conrad, W. K., 88M/0058 Conradie, J. A., 88M/5638 Constantiniuc, V., 88M/6178 Conte, A., 88M/6223 Conticelli, S., 88M/1316 Contini, D., 88M/0204 Convert, J., 88M/3034 Cook, A. D., 88M/0498 Cook, D. J., 88M/4672 Cook, J. M., 88M/2374, 3828 Cook, N. D. J., 88M/4751 Cook, P. S., 88M/1432 Cook, R. B., 88M/4526 Cook Jr, R. B., 88M/4527, 4528 Cooke, B. J., 88M/2485 Cooke, G. A., 88M/0072 Cooper, A. F., 88M/3241, 4421 Cooper, D. C., 88M/2892 Cooper, J. A. G., 88M/6334 Cooper, M. P., 88M/1565 Cooper Jr, J. F., 88M/3168 Cooper-Fleck, M., 88M/6079 Copeland, P., 88M/3232 Coplen, T. B., 88M/4929, 5859 Coppens, P., 88M/1780 Copperthwaite, Y. E., 88M/ 4910

Coradossi, N., 88M/2220 Corazza, E., 88M/4538, 6238 Corazza, M., 88M/2609, 2628 Corbato, C. E., 88M/3365 Corbett, K. D., 88M/0356 Cordani, U. G., 88M/5681 Cordier, P., 88M/5395, 5443 Corfu, F., 88M/0038, 1650, 4912, 4914 Corma, A., 88M/0119, 3381 Cormy, G., 88M/2133 Cornejo, P., 88M/5244 Cornelius, M., 88M/0809 Cornell, R. M., 88M/2036 Cornen, G., 88M/1369 Corner, E. D. S., 88M/4128 Cornette, Y., 88M/4552 Cornides, I., 88M/2382 Cornish, J., 88M/5407 Cornwell, J. C., 88M/3287, 4311 Cornwell, J. D., 88M/6113 Coronel, M. J. Huertas, 88M/ 1242 Corretge, L. G., 88M/1240 Corriveau, L., 88M/2870 Corry, C. E., 88M/4771 Corselli, C., 88M/1420 Corsini, A., 88M/1690 Corsini, F., 88M/2609, 2628 Cortecci, G., 88M/1912 Cortesogno, L., 88M/0710, 0986, 1073, 4611 Cosca, M. A., 88M/0453 Cosentino, M., 88M/4554 Cosovic, B., 88M/4185 Cossa, D., 88M/0823 Cossato, Y. Marzoni Fecia di, 88M/6081 Costa, J. R. Graca, 88M/1936 Cotkin, S. J., 88M/1505 Cotter, M. P., 88M/4637 Cottin, J. Y., 88M/1021, 1036, 6051 Couce, M. L. Andrade, 88M/ 0617 Couilloud, D., 88M/1907 Coulon, C., 88M/6305

Courrioux, G., 88M/1157, 1233 Courtillot, V., 88M/3133, 4575 Courtney, R. C., 88M/1549 Courtney, S. F., 88M/6481 Courtois, G., 88M/5321 Coutinho, J. M. V.d'Albissin, M. Chaye, 88M/3099

Dabitzias, S., 88M/4726 Dacey, J. W. H., 88M/0832, 4077 Dachs, E., 88M/3064 Dack, L. Van't, 88M/0419, 2312, 4017 Daddar, R., 88M/6010 Dagelaiskaya, I. N., 88M/3089 Dagger, G. W., 88M/6156 Dagley, P., 88M/0008 Dahan, N., 88M/3870 Dahanayake, K., 88M/2103

Dahl, J., 88M/4012 Dahlen, F. A., 88M/4794 Dahmani, A., 88M/6393 Dahmke, A., 88M/3695 Dai, J. H., 88M/3619 Daieva, L., 88M/2129 Daily, B., 88M/5595 Dal Negro, A., 88M/5101 Dale, L. S., 88M/5724, 5892 Dalen, A. C. Kock-van, 88M/ 2422, 2450 Dalena, D., 88M/3155 Dallmeyer, R. D., 88M/0007, 3113, 3174, 3191, 4862, 4917 D'Almeida, F. A., 88M/4926 Dalrymple, G. B., 88M/0736, 1334 Dalrymple, R. W., 88M/1746 Daly, P. J., 88M/3764 Daly, T. A., 88M/5726 D'Amico, K. L., 88M/1663 Damman, A., 88M/4257 D'Amore, F., 88M/2123 Damste, J. S. S., 88M/0851 Damste, J. S. Sinninghe, 88M/2422, 2450, 4121 Dandurand, J.-L., 88M/3815 Dandy, A. J., 88M/0212, 0441 Danek, V., 88M/0467, 0520 Dangerfield, J., 88M/3572 d'Anglejan, B., 88M/5735 Dang Vu Minh, , 88M/0930 Danil'chenko, A. Ya., 88M/0057 Danilova, K. N., 88M/1076 Danis, D., 88M/6215 Danis, M., 88M/2347 Dao-Gong, C., 88M/0736 Darbinjan, F., 88M/4006 D'Arcy, W. F., 88M/1457 Dardenne, M. A., 88M/5310 Darida-Tichy, M., 88M/1306 Darimont, A., 88M/0611, 3874, 5349 Darling, W. G., 88M/2374, 4009, 4011, 5858 Darmoian, S. A., 88M/6332 Darnley, A. G., 88M/5173 Daroca, J., 88M/1901 Darragi, F., 88M/2386 Das, B. J., 88M/4734 Das, B. K., 88M/4737 Das, D. P., 88M/4388 Das, M. C., 88M/5716 Das, M. S., 88M/5617 Das, S. K., 88M/1022 Dasch, E. J., 88M/4187, 4188 Dasgupta, A., 88M/2572 Dasgupta, P. K., 88M/2860 Dasgupta, S., 88M/4296 Dasu, S. P. V., 88M/4399 Date, S. K., 88M/2033 Datta, A. K., 88M/1390 Datta, N. K., 88M/4388 Dautria, J. M., 88M/2748 Davey, F. J., 88M/6130 Davey, R. J., 88M/5136 Davidescu, F. D., 88M/5872 Davidson, A., 88M/0096, 2503

Davidson, C. I., 88M/0404

Davidson, J. P., 88M/0751, Decarreau, A., 88M/0113, 0566 2279 Davidson, P. M., 88M/0251 Davies, B. E., 88M/0421 Davies, B. L., 88M/0066 Davies, D. J. A., 88M/0411 Davies, G. R., 88M/2782 Davies, J., 88M/5332 Davies, J. F., 88M/4005 Davies, R. M., 88M/5270 Davies, T. D., 88M/0401 Davis, A., 88M/1961 Davis, A. E., 88M/3572 Davis, A. S., 88M/3910 Davis, B., 88M/5286 Davis, D. W., 88M/2871, 4912 Davis, G. H., 88M/1183, 5859 Davis, J. A., 88M/0498, 0506 Davis, J. M., 88M/0879 Davis, K. L., 88M/3446, 4286 Davis, P. M., 88M/6499 Davis, S. N., 88M/3907 Davison, C. C., 88M/3820 Davison, I., 88M/1184 Davison, W., 88M/0926 Davoli, P., 88M/1832, 3489, 4256 Davoudzadeh, M., 88M/1388 Davy, R., 88M/4907 Dawoud, A. S., 88M/4889 Dawson, J. B., 88M/0103, 1259, 2541, 2764, 2788, 3013 Dawson, K. R., 88M/1945 Dawson, M. R., 88M/1653 Day, H. W., 88M/4621 Day, R. B., 88M/1670 Daynyak, L. G., 88M/1807, 3467 Dazy, J., 88M/5849 Deak, J., 88M/5866 Dean, C., 88M/0146, 0257, 1800 Dean, L. S., 88M/0362, 4521, 4527, 4528 Deane, A., 88M/0118 Deane, A. T., 88M/0117, 1727, 1728 de Azcona, M. C. Lopez, 88M/ 6117, 6485 de Azevedo, J. M. Martins, 88M/1380 de Baar, H. J. W., 88M/5847 Debat, P., 88M/6393 De Battisti, L., 88M/1577 de Bilt, G. P. van, 88M/6326 Debon, F., 88M/3215, 3231, 4459, 6167, 6169 Debrabant, P., 88M/4655 De Bremaecker, J. Cl., 88M/ 1593 de Bruiyn, H., 88M/1261, 2555 de Bussetti, S. G., 88M/4989 De Camargo, M. Bueno, 88M/ 6437 de Capitani, C., 88M/1986 De Capitani, L., 88M/2212, 2214 De Carlo, E. H., 88M/0652,

De Casa, C. G., 88M/1576 De Casa, G. G., 88M/4819 de Castro, C. A. Nieto, 88M/ 3716 Dechambenoy, C., 88M/4557 Dechomets, R., 88M/1862 Deckman, H. W., 88M/1663 Decleer, J., 88M/3269, 3398 DeDekker, P., 88M/6341 Dedoes, R. E., 88M/3765 Deeny, D. E., 88M/0303 Defant, M., 88M/5663 Defant, M. J., 88M/3958, 4522, 5661, 5662 Defarge, C., 88M/0855 de Federico, A. Diaz, 88M/ 2207 Freitas Carvalho, Tavares, 88M/1860 de Gennaro, M., 88M/0824, 5486, 6094 de Graaf, B. van, 88M/5914 DeGraff, J. M., 88M/4544 De Grave, E., 88M/5111 DeGroot, P. B., 88M/3311 DeHaan, M. S., 88M/4112 de Haas, G. J. L. M., 88M/ 3734 Dehairs, F., 88M/4082 Deines, P., 88M/0612 Deininger, R. W., 88M/4515, 4516, 4520 de Jong, A. F. M., 88M/2969 de Jong, B. J. W. S., 88M3478 Dejonghe, L., 88M/3527, 3602, 4014, 4640 Dejonhe, L., 88M/3854 Dejou, J., 88M/0182, 0197, 5029 de Kamp, P. C. Van, 88M/1444 de Kimpe, C., 88M/0197 De Kimpe, C. R., 88M/0182 de Klerk, W. J., 88M/2846 del Arco, M., 88M/1735 de la Casa Martinez, C., 88M/ 6485 Dela Cruz Jr, A. P., 88M/2474 De Laeter, J. R., 88M/1634, 2532, 5597 Delahunty, R., 88M/2689 Delaloye, M., 88M/2226, 2970 Delaney, J. R., 88M/1379 Delaney, J. S., 88M/2533 Delaney, M. L., 88M/4146 de Lange, F., 88M/2450 De Lange, G. J., 88M/0825, 5825 Delano, J. W., 88M/2772 de la Pena, J. A., 88M/2972 de Larouziere, F. D., 88M/1162 Delboff, F., 88M/3686 Delcambre, B., 88M/4645 De Leeuw, J. E., 88M/2415 De Leeuw, J. W., 88M/0850, 0851, 1419, 2412, 2422, 2450, 4121, 5889, 5903, 5914 de Leon, M. Iglesias Ponce, 88M/1605

de Lepinay, B. Mercier, 88M/ 4852 Delevaux, M. H., 88M/2490 Deliens, M., 88M/1074, 4347, 6093 Delitala, M. C., 88M/0017 Dell'Anna, L., 88M/0169 Della Giusta, A., 88M/3491 Della Ventura, G., 88M/1003 Della Ventura, G. C., 88M/ 1576 Della Ventura, G. G., 88M/ 4819 Delor, C., 88M/4710 Delova, D., 88M/0076 de L. P. Castro Reis, M., 88M/4926 del Pozzo, A. L. Martin, 88M/ 1365 De Luca Rebello, A., 88M/4078 de Lummen, G. van Marcke, 88M/3812 del Villar, F. J. Luque, 88M/ 5445, 6473 Delville, A., 88M/5320 Demaiffe, D., 88M/4441 Demant, A., 88M/0043 De Marco, A., 88M/2975 DeMaster, D. J., 88M/2401 Demin, S. S., 88M/6099 Demina, L. A., 88M/6087 Demina, L. L., 88M/2388 Demir, I., 88M/4991 Demirel, T., 88M/3317 de Mora, S. J., 88M/0926 den Berg, C. M. G. Van, 88M/ 0818, 1686, 2425, 4957 Den Driessche, J. Van, 2726 den Eeckhout, B. van, 88M/ 6377 den Hoek Ostende, E. R. van, 88M/6326 den Hul, H. J. van, 88M/0922, 2946 Deniel, C., 88M/1277 den Kerkhof, A. M. van, 88M/ DeNiro, M. J., 88M/4958 Denis, B., 88M/0214 Denis, M., 88M/5776 Denisov, A. B., 88M/6193 de Nooy, D., 88M/4747 Denoux, G. J., 88M/0861 den Tex, E., 88M/2940 DePaolo, D. J., 88M/0814, 3252, 5673 de Pablo Macia, J. G., 88M/ 6170 de P. Blasi, C., 88M/4275 de Peyronnet, P., 88M/0704 Depmeier, W., 88M/5141 Derdacka-Grzymek, A., 88M/ 3391 der Eerden, A. M. J. van, 88M/0559, 3734, 4271, 5472 Dereppe, J. M., 88M/2449 der Flier-Keller, E. Van, 88M/

der Gaast, S. J. van, 88M/1063 Derham, J. M., 88M/6160 der Heyden, P. van, 88M/2874 der Merwe, N. J. van, 88M/ der Plas, L. van, 88M/2583 der Pluijm, B. A. van, 88M/ 4696 Derre, C., 88M/1860, 1880 Derry, L. A., 88M/5768 Deruelle, B., 88M/1311 der Wal, R. J. van, 88M/0240 Derweduwen, J., 88M/0323 der Westhuizen, W. A. van, 88M/1261, 2555 Deryagina, G. G., 88M/1019 Desautels, P. E., 88M/6487 Deshpande, C. E., 88M/2033 Desilets, M. O., 88M/2499, 4928 de Siloniz, I., 88M/5570 Desmet, A., 88M/6186 Desmons, J., 88M/3058 Desmukh, B. T., 88M/3288 Desprairies, A., 88M/0165 Dessai, A. G., 88M/1275, 1427 Desta, B., 88M/0021 d'Estevou, P. Ott, 88M/1162 De Sury, R., 88M/4143 Detellier, C., 88M/1738 Determann, J., 88M/1594 de Toselli, J. N. Rossi, 88M/ 4534 Deurbergue, A., 88M/4663 Deutsch, A., 88M/0929 Deutsch, S., 88M/3208 Devarajan, V., 88M/1509 Devaraju, T. C., 88M/1773 Dever, L., 88M/5744, 5868 Devey, C. W., 88M/2905 Devirts, A. L., 88M/2131, 4220, 5474 Devnina, N. N., 88M/1085 Deynoux, M., 88M/1621 Deyoung Jr, J. H., 88M/3606 Dhamelincourt, P., 88M/0611, 2135 Dharmadasa, D., 88M/0913 Dhia, H. Ben, 88M/4778 Dhople, V. M., 88M/5917 Dhoundial, D. P., 88M/0723, 4382 Dia, A., 88M/1312 Diamond, L. W., 88M/1610 Diaz, L. Fernandez, 88M/5432 Diaz de Federico, A., 88M/ 2207 Diaz-Garcia, F., 88M/6394 Diaz Rodriguez, L. A., 88M/ 3581 Di Battistini, G., 88M/1606 Dickenson III, M. P., 88M/6424 Dickhout, R. D., 88M/0080 Dickin, A. P., 88M/0699, 4879 Dickinson, K. A., 88M/2189 Dickinson, R. G., 88M/0295 Dickinson, W. W., 88M/0787 Dickson, B. L., 88M/2468, 4176

Dickson, J. A. D., 88M/2298, Dickson, S. M., 88M/4239 di Cossato, Y. Marzoni Fecia, 88M/6081 Didier, J., 88M/1450. 2834. 4446, 6163 Diefenbach, K. W., 88M/6225 Diella, V., 88M/2589 Diester-Haass, L., 88M/5708 Diethelm, K., 88M/2835 Dietrich, H., 88M/3065 Dietrich, V., 88M/2211 Dietrich, V. J., 88M/0693, 1377, 2900 di Francesco, M., 88M/4554 Digennaro, M. A., 88M/2975 Dijkstra, S., 88M/0922 Dikov, Yu. P., 88M/2557 DiLabio, R. N. W., 88M/2331 Dileep Kumar, M., 88M/4103 Dill, H., 88M/2156, 3217, 3535, 3603, 3891, 4023, 5919 DiMarco, M. J., 88M/5027 Dimberline, A. J., 88M/1145 Dimitrakopoulos, R., 88M/3989 Dimitrova, E., 88M/1165 Dimroth, E., 88M/2998, 3033, 4512 Din, V. K., 88M/4337 Dinalankara, D. M. S. K., 88M/ 5561 Ding, T., 88M/5938 88M/0479, Dingwell, D. B., 3689 Dirlam, D. M., 88M/5490 Disko, U., 88M/5916 Disnar, J.-R., 88M/1417 Dissanayake, C. B., 88M/1934, 2315, 5561, 5719 Distler, V. V., 88M/2166 Di Vito, M., 88M/1303 Dixon, A. G., 88M/3745 Dixon, J. B., 88M/0526, 1014, 1442, 3259, 3383 Dixon, J. E., 88M/3805 Dmitriev, E. A., 88M/4263 Dmitriev, L., 88M/5527, 5621 Dmitriyev, L. V., 88M/5600 do C. Machado, M. J., 88M/ 4950 Dobiejewska, E., 88M/3401 Dobolyi, F., 88M/1691 Dobosi, G., 88M/4253 Dobrecov, N. L., 88M/1479 Dobretsov, N. L., 88M/6374 Dobrovol'skiy, Ye. V., 88M/ 5686 Dobrzynski, D., 88M/0826 Dobson, G., 88M/5900 Dobson, J., 88M/2423 Docherty, R., 88M/5136 Docka, J. A., 88M/1798 Doesburg, J. D. J. van, 88M/ 2583 Doi, A., 88M/4979 Doig, R., 88M/0036, 4898 Doil'nitsyn, Ye. F., 88M/2431 Dojcilovic, J., 88M/6447

Dolenec, T., 88M/4093 Dolgikh, V. I., 88M/6087 Dollar, P., 88M/5784 Domenech, M., 88M/6485 1M88 Domeneghetti, M. C., 5099, 5460 Domenico, J. A., 88M/0918 Domingo, B., 88M/5289 Dominguez Bella, S., 88M/2052 Dominguez-Gil, A., 88M/0116, Dominik, J., 88M/1958 88M/3882, Donahue, D. J., 5958 Donaldson, C. H., 88M/0465, 2080 Dondi, M., 88M/0167 Dongarra, G., 88M/2379 Donker, J. M. van Bever, 88M/ 1167 Donneley, T. H., 88M/0355, 4040, 5723 Donovan, S. K., 88M/1588 Donville, B., 88M/5867 Dora, Y. L., 88M/4657 Dorber, J. K., 88M/2228 Dorchies, L., 88M/3873 Doremus, P., 88M/2151 Dorfman, A. M., 88M/5389 Doroshev, A. M., 88M/0548, 5465 Dorr, H., 88M/5852 Dorrzapf Jr, A. F., 88M/2496, 2497 Dorst, S. van, 88M/1957 Doshi, G. R., 88M/3284 dos Santos, F. J. Viera, 88M/ 3716 Dosso, L., 88M/5640 Dostal, J., 88M/0706, 2194, 2252, 3944, 3976, 5658 Douch, C. J., 88M/5225 Dougall, N. K., 88M/1920 Doughten, M. W., 88M/4184 Douglas, A. G., 88M/5891 Douglas, L. A., 88M/0141, 3370 Doukhan, J.-C., 88M/2065. 5395, 5443 Doukhan, N., 88M/2065 Dousset, P. E., 88M/0887, 0914 Doval, M., 88M/5435 Doval Montoya, M., 88M/6026 Dove, P. M., 88M/2013, 2015 Downes, H., 88M/1124, 2742, 2806 Downes, M. J., 88M/0323 Downing, B. W., 88M/2484 Downs, J. W., 88M/0246, 1794 Dowty, E., 88M/5078 Doyle, P. J., 88M/0408 Drabik, M., 88M/3756 Dragoo, A. L., 88M/1011, 3446, 4286 Drake, M. J., 88M/1998 Dray, M., 88M/5849 Drees, L. R., 88M/3436 Dreschhoff, G. A. M., 88M/ 3838 Drever, J. I., 88M/2008

0783

Drexel, J. F., 88M/0383 Drexler, J., 88M/0521 Drexler, J. W., 88M/6091 Dreybrodt, W., 88M/5437 Driessche, J. Van Den, 88M/ Drimmie, R. J., 88M/5876 Driouch, Y., 88M/6393 Drits, V. A., 88M/0270, 1066, 1807, 2616, 3329, 3467, 4346 Drobyshevski, E. M., 88M/4205 Dromgoole, E. L., 88M/4415 Dron, D., 88M/0775 Droop, G. T. R., 88M/0075 Drouet, J.-J., 88M/3612 Drozd, R. J., 88M/4156 Drubetskoy, E., 88M/4901 Druecker, M. D., 88M/6226 Druitt, T. H., 88M/1357, 5674 Drummond, M. S., 88M/4522-4525, 4529 Drury, M., 88M/3143 Drury, M. R., 88M/6101 Druzhinin, A. V., 88M/2238 Drynkin, V. I., 88M/5646 Dsadchiy, Ye. G., 88M/5423 Du, C., 88M/1088 Du, R., 88M/3634 Duan, Z., 88M/2989 Duane, M. J., 88M/3573 Dube, B., 88M/3600 Dubessy, J., 88M/1904, 5605 Dubey, K. P., 88M/5718 Dubinchuk, V. T., 88M/4029, 5600 Dubinin, A. V., 88M/0777 Dubinina, O. V., 88M/0079 Dubinska, E., 88M/1740, 3362 Dubois, A., 88M/0508 Dubois, A.-D., 88M/3285 Dubois, J. D., 88M/5813 Dubrasova, N. A., 88M/2233 Dubrawski, J. V., 88M/1034, 2035 Duca, V., 88M/6038 Duce, R. A., 88M/2396 Duchac, K. C., 88M/3025 Duchene, M., 88M/3512 Duchesne, J. C., 88M/2542, 4055, 4251, 6151 Duchi, V., 88M/2378, 1302 Duczmal, T., 88M/1739 Duda, R., 88M/1056 Dudas, F. O., 88M/0742, 2735 Dudas, M. J., 88M/0502, 3385, 3620 Duddy, I. R., 88M/4330 Dudoignon, P., 88M/0164 Due, A., 88M/5914 Duebendorfer, E. M., 88M/4758 Duenas, C., 88M/4003 Duff, P. McL. D., 88M/5021 Dugan Jr, J. P., 88M/4930 Dugdale, R. E., 88M/5765 Duggan, M. B., 88M/6020, 6059 Duit, W., 88M/0602, 5472 Dujon, S. C., 88M/2016, 2019 Duke, N. A., 88M/0360

Dulinski, M., 88M/5878

Dumka, D., 88M/2626 Dummett, H. T., 88M/2494, 4428 Duncan, A. M., 88M/1304, 2897 Duncan, A. R., 88M/0673 Duncan, R. A., 88M/1374 Dungan, M. A., 88M/0751, 4437 Dunlop, D. J., 88M/1521, 1523, 1528 Dunn, C. E., 88M/0897 Dunn, P. J., 88M/0972, 1040, 1089, 1093, 1096, 2622, 2623, 2637, 2659, 2664, 3169, 4307, 4846, 6067, 6090, 6092 Dunn, T., 88M/0456 Dunn, W. L., 88M/3307 Dunning, G. E., 88M/3168 Dunning, G. R., 1643, 2954, 4874, 4912 Duplessy, J.-C., 88M/0002, 3982, 5328 Dupont, J., 88M/6264 Dupont, L. M., 88M/5907 Dupre, B., 88M/5587 Duprat, J., 88M/0002 Dupree, R., 88M/1785 Dupuy, C., 88M/0706, 2194, 3944, 3976, 5658 Duran Barrachina, M. A., 88M/ 0904 Durand-Wackenheim, C., 88M/ 6060 Durasova, N. A., 88M/3694 Durgaprasada Rao, N. V. N., 88M/2986 Durge, S. L., 88M/5041 Durgun, H., 88M/1455 Duroc-Danner. J. M., 88M/3775 Durrance, E. M., 88M/1966 Durrani, S. A., 88M/4229 Dusausoy, Y., 88M/5134, 5135 Dusel-Bacon, C., 88M/3911 d'Uston, C., 88M/0960 Duthou, J. L., 88M/3929 Dutrizac, J. E., 88M/0100 Dutrow, B. L., 88M/6422 Duursma, E. K., 88M/2425 Duval, A., 88M/6486 Dyar, M. D., 88M/0671, 2536 Dyck, W., 88M/0888, 2333 Dyda, M., 88M/6404 Dyer, A., 88M/1013 Dyjor, S., 88M/0194 Dymek, R. F., 88M/1009, 1052, 2582, 2671, 3032 Dymond, J., 88M/2453, 4107 Dyrssen, D., 88M/5798 Dyson, J. S., 88M/0126 Dzhevanshir, R. D., 88M/0179 Dzidowska, K., 88M/0157, 5005 Dzurisin, D., 88M/1338, 1339, 1340

Eadie, J., 88M/2111 Eadington, P. J., 88M/0648 Eales, H. V., 88M/2846 Eardley, H., 88M/4629

Earhart, R. L., 88M/5292 Easey, J. F., 88M/5880 Eastoe, C. J., 88M/1445, 2011 Easton, R. M., 88M/1336 Eaton, J. P., 88M/4791 Ebel, D. S., 88M/3814 Ebel, H., 88M/3324 Eberhart, J.-P., 88M/2004, 3679 Eberl, D. D., 88M/2581 Ebihara, M., 88M/2528 Ebneth, J., 88M/4456 Eby, G. N., 88M/2802 Eccles, C., 88M/1143 Ece, O. I., 88M/0185 Echer, C. J., 88M/5964 Eckert, H., 88M/5442 Economou, M. I., 88M/1383 Edelman, N., 88M/3045 Eden, D. N., 88M/5060 Edenborn, H. M., 88M/2329 Edgar, A. D., 88M/1995, 2785 Edgerton, D. G., 88M/6345 Edmond, J. M., 88M/0792, 0821, 2338, 4167 Edmunds, W. M., 88M/2374, 3828, 4009, 5858 Edwards, R. A., 88M/1415 Edwards, R. L., 88M/0048 Edwards, T. W. D., 88M/0830 Eeckhout, B. van den, 88M/ 6377 Eenbergen, A. van, 88M/3314 Eerden, A. M. J. van der, 88M/0559, 3734, 5472 Effenberger, H., 88M/0278, 1826, 3504, 5140, 5163 Efimov, M. M., 88M/0582 Egeberg, P. K., 88M/5801, 5802 Eggers, A. A., 88M/2882 Eggert, P., 88M/5299 Eggins, S., 88M/2864, 6282 Eggins, S. M., 88M/6297 Eggler, D. H., 88M/0742, 0743, 2735, 3010, 4418 Eggleton, R. A., 88M/0189, 0255, 4274, 5028, 6199 Eglington, B. M., 88M/1257, 5753 Eglinton, G., 88M/0851, 4118, 4128, 5900, 5910 Egorov, K. N., 88M/4325 Ehlers, E. G., 88M/3337, 3338 Ehlers, K., 88M/5966 Ehrenbard, R. L., 88M/3176 Ehrenberg, S. N., 88M/2736 Ehret, G., 88M/2004 Eichinger, L., 88M/5853 Eidel, J. J., 88M/4179 Eilers, J. M., 88M/4112 Einaudi, M. T., 88M/0387 Eisenberger, L., 88M/1583 Eisenreich, S. J., 88M/5773 Eissa, N. A., 88M/2540 Eissen, J.-P., 88M/6264 Ejeckam, R. B., 88M/3116 Ek, J. I., 88M/2460

Ekwere, S. J., 88M/4489

Ekwueme, B. N., 88M/3221, 4058 El-Baz, F., 88M/4199 Elbaz-Poulichet, F., 88M/3625 Elderfield, H., 88M/2291, 2292, 2295, 5847 Elders, C. F., 88M/4881 Elders, W. A., 88M/1983, 5789 El-Daoushy, F., 88M/5902 Eldridge, C. S., 88M/5789 Eleftheriadis, G., 88M/2570 Eleftheriadis, G. E., 88M/6018 El Goresy, A., 88M/5966 El Hajri, J., 88M/3715 Elias, P., 88M/3244 Ellam, R. M., 88M/5615 Elliot, R. W., 88M/4468 Elliott, I. L., 88M/1704 Elliott, P., 88M/6070 Ellis, D. J., 88M/0550, 1501 Ellis, D. V., 88M/3632 Ellis, K. M., 88M/1964 El-Kammar, A., 88M/3867 El-Kammar, M., 88M/0176 Ellwood, D. J., 88M/0915 Elmore, D., 88M/0087, 3831, 3907 El Mouraouah, A., 88M/2834, 6163 Elphick, S. C., 88M/5454 El-Rahmani, M. M., 88M/3943 Elrashidi, M. A., 88M/4001 Elrick, K. A., 88M/3977, 5340 El-Ries, M. A., 88M/2057 El-Shafy, A. Abd, 88M/2984 El-Sharkawy, A. A., 88M/0518 El-Sayed, M. K., 88M/4031 Elsenhans, U., 88M/0232 Elsinger, R. J., 88M/5803 Elson, J. A., 88M/1436 Elvira, J. J., 88M/4821 Elvira, M. A., 88M/6117 Emblin, S. R., 88M/2815 Embrey, P. G., 88M/3336 Emburg, P. R. van, 88M/5825 Emeleus, C. H., 88M/1193, 2803 Emerson, S., 88M/2454 Emerson, S. R., 88M/5766 Emery, D., 88M/2298 Emms, E. C., 88M/2093 Emura, S., 88M/5165 Enami, M., 88M/0994, 2128, 6005 Enamy, H., 88M/1013 Encrenaz, T., 88M/5990 Ender, A., 88M/5408 Endo, Y., 88M/2879 Enever, J. R., 88M/6134 Engelhardt, H., 88M/1594 Engelhardt, W. v., 88M/0963 Engell-Sorensen, O., 88M/1190 Engeln, J. F., 88M/4853 Engi, M., 88M/3020 England, B. M., 88M/4308 Engler, P., 88M/0074 Ennaoui, A., 88M/2039 Enos, P., 88M/6355 Enrique, P., 88M/3215

Epatko, Yu. M., 88M/3894 Epel'baum, M. B., 88M/5371 Epstein, S., 88M/0510, 0511, 2526, 5960 Erba, E., 88M/1419 Erbayar, M., 88M/4172 Erbe, C., 88M/4806 Ercan, T., 88M/1313. 4484. 4568, 4569 Ercit, T. S., 88M/1042, 1084, 1095, 1829, 1834, 1836, 4344 Erd, R. C., 88M/4282 Erdmer, P., 88M/3118, 3246 Eremeev, N. V., 88M/2848 Erez, J., 88M/0865 Ergun, O. N., 88M/4281 Ericksen, G. E., 88M/6352 Erickson, M. S., 88M/4179 Erickson, R. L., 88M/4179 Erickson III, D. J., 88M/4239 Erikson, R. L., 88M/0440 Eriksson, L., 88M/2686 Erlank, A. J., 88M/0803, 3015 Ermolaev, N. P., 88M/4317 Ermrich, M., 88M/1789 Ernewein, M., 88M/1385 Ernst, R. E., 88M/6212 Ernst, W. G., 88M/1216, 2705 Erskine, B. G., 88M/2729 Erslev, E. A., 88M/5763 Ertel, A., 88M/1405 Erten, H. N., 88M/5010 Erzinger, J., 88M/2341 Esbenseb, K., 88M/0899 Eschenbrenner, S., 88M/4605 Escudey, M., 88M/4999 Eshleman, K. N., 88M/4112 Eskenazy, G. M., 88M/0767 Espitalie, J., 88M/5890, 5895, Essene, E. J., 88M/0279, 0392, 0430, 0453, 2612, 3770, 4921, 5760, 6373 Estoque, J., 88M/5289, 5290 A., Etchecopar, 88M/2724. 2727 Etheridge, M. A., 88M/1848, 4338 Etminan, H., 88M/0355 Etu-Efector, J. O., 88M/4028 Etz, E. S., 88M/1093 Eugster, H. P., 88M/2005, 2370, 3345, 3669, 5209 Eugster, O., 88M/2520 Evangelou, V. P., 88M/3376 Evans, B., 88M/2049, 5436 Evans, B. W., 88M/0980 Farrah, H., 88M/2038 Evans, C. A., 88M/4423 Farrar, E., 88M/0046, 2240 Evans, C. J., 88M/6461 Farrenkothen, K., 88M/6328 Evans, E. H., 88M/4923 Farwell, G. W., 88M/2454 Evans, J. G., 88M/0920 Farwell, S. O., 88M/3280 Evans, R. B., 88M/0909 Faryad, S. W., 88M/0344 Evans, S. T., 88M/5989 Fasfous, B. R. B., 88M/3943 Evans, S., 88M/3465 Faul, H., 88M/0020, 5636 Evans Jr, H. T., 88M/0269, Faulkner, T. J., 88M/6321 5459 Faure, G., 88M/0386, 5574 Evans, F. H., 88M/1585 Faure, M., 88M/1633, 2696 Everdingen, R. O. van, 88M/ Fawcett, T. G., 88M/3323 1058 Fay, J. E., 88M/2500

Ewald, M., 88M/4143 Ewart, A., 88M/5210 Ewers, G. R., 88M/5177 Ewing, R. C., 88M/0975, 3122 Exel, R., 88M/1709 Exley, C. S., 88M/4270 Eysel, W., 88M/5104, 5105 Faber, J., 88M/1822 Faber Jr, J., 88M/4765 Fabiani, W. M. B., 88M/0324 Fabre, D., 88M/3266 Fabrichnaya, O. B., 88M/3719, 5379, 5450 Fabricius, J., 88M/5695 Fabries, J., 88M/0706, 6014 3907 Fadda, S., 88M/2463 Faganeli, J., 88M/4093 Fahey, A. J., 88M/4215 Fahrig, W. F., 88M/6213

Fabryka-Martin, J., 88M/3289, Failla, A., 88M/1760 Fainberg, A. H., 88M/1061 Fairbanks, R. G., 88M/5832 Fairchild, I. J., 88M/4008 Falchi, G., 88M/0766 Falcucci, M., 88M/4092 Falkner, A. J., 88M/6253 Falkner, K. K., 88M/5599 Fallick, A. E., 88M/1135, 2816, 3991, 3998, 5551, 5696 Fallon, R. D., 88M/4051 Falloon, T. J., 88M/0473, 3640, 6282, 6297, 6299 Falsaperla, S., 88M/4559, 4560 Falster, A. U., 88M/1811 Falvey, D. A., 88M/6295 Fan, D., 88M/6033 Fan, Q., 88M/3320 Fan, W., 88M/5583 Fan, Y. B., 88M/6338 Fanaskova, T. P., 88M/4000 Fancelli, R., 88M/2123 Fang, Q., 88M/4504 Fano, H., 88M/1909 Fardy, J. J., 88M/5892 Farinha, J. A., 88M/5925 Farley, E., 88M/4801 Farmer, G., 88M/0401 Farmer, V. C., 88M/3426 Farnan, I., 88M/1785 Farquar, R. M., 88M/2330 Farquhar, R. M., 88M/1649, 2182

Fayziyev, A. R., 88M/5577 Fazekas, V., 88M/6241 Febrillet, J. F., 88M/5865 Fecht, K. R., 88M/1356 Fecia di Cossato, Y. Marzoni, 88M/6081 Federico, A. Diaz de, 88M/ 2207 Federico, M., 88M/2602 Fedorchuk, A. V., 88M/2267 Fedorenko, J. G., 88M/0567 Fedorov, P. L., 88M/3697 Fedorova, M. E., 88M/1269 Feely, M., 88M/2205, 3207, 3924, 6160 Feely, R. A., 88M/2006, 2397, 3177 Feenstra, A., 88M/3805 Fegley Jr, B., 88M/0964 Fei, Y., 88M/3839, 5359 Feigenson, M., 88M/5639 Fein, J. B., 88M/0496 Feiznia, S., 88M/4671 Felder, R. P., 88M/0386 Felsche, J., 88M/0263, 1815 Fendinger, N. J., 88M/3619 Feng, H., 88M/0417 Feng, J., 88M/1136, 4504 Feng, Z., 88M/0594 Fenoll Hach-Ali, P., 88M/1879 Fenton, T. E., 88M/5002 Feraud, G., 88M/3209 Ferguson, A. K., 88M/6014 Ferguson, C. C., 88M/1102 Ferguson, J., 88M/1407, 2117, 5167, 5177, 5723 Ferguson, K. M., 88M/0751 Ferguson, R. B., 88M/1006 Ferguson, R. L., 88M/0925 Fergusson, C. L., 88M/2697 Fergusson, L. J., 88M/5267 Feriancik, E., 88M/3281 Fernandes, J. F., 88M/0812 Fernandez, A., 88M/1163, 2834, 6163 Fernandez, C. J. Fernandez, 88M/0617, 3581 Fernandez Diaz, L., 88M/5432 Fernandez, J. F., 88M/1368, 4601 Fernandez, M. C., 88M/4003 Fernandez Santin, S., 88M/5366 Fernandez Turiel, J. L., 88M/ 0904 Ferrara, G., 88M/3254, 4537 Ferrari, L., 88M/1362 Ferrario, A., 88M/2215 Ferraris, G., 88M/0253, 5092 Ferrati, N., 88M/1475 Ferreira, V., 88M/1380 Ferreira, V. P., 88M/5679 Ferreira Pinto, A. F., 88M/ 1451 Ferreiro, E. A., 88M/4989 Ferrell Jr, R. E., 88M/5027 Ferret, J., 88M/5441 Ferretti, O., 88M/1759 Ferrina, V., 88M/0906, 2154, 3863, 5700

Ferris, F. G., 88M/5736 Ferrow, E. A., 88M/3456 Ferry, J. M., 88M/3668, 5759 Fershtater, G. B., 88M/4479, 5644 Fesq, H. W., 88M/0720 Feuga, B., 88M/4086 Feybesse, J. L., 88M/3890 Fiala, J., 88M/2352 Ficklin, W. H., 88M/0747 Fiechter, S., 88M/2039 Fiedler, H. J., 88M/1772 Fiedler, W., 88M/3439 Fiedrich, G., 88M/3855 Field, C. W., 88M/5238 Field, M., 88M/2846 Figueiredo, M. C. H., 88M/ 2118 Fijal, J., 88M/1730 Filatov, L. K., 88M/0523 Filatov, Ye. I., 88M/2164 Filby, R. H., 88M/4184 Filho, J. B. M. Madureira, 88M/2880 Filimonova, A. A., 88M/3088 Filimonova, L. G., 88M/3521 Filippov, V. N., 88M/1023 Fillipone, J., 88M/1654 Finch, J., 88M/0256 Finch, W. I., 88M/5174 Fine, G., 88M/3739 Fine, S., 88M/2959 Finger, L. W., 88M/1511, 1513, 1780, 2663, 5097 Fink, J. H., 88M/4465 Finkelman, R. B., 88M/1061 Fin'ko, V. I., 88M/2657 Finlayson, B. L., 88M/3479 Finlayson, E. J., 88M/5207 Finlayson, J. B., 88M/6230 Finnegan, D. L., 88M/2245 Finnerty, A. A., 88M/2759 Finnstrom, E. G., 88M/1136 Fiore, S., 88M/0169 Fiori, M., 88M/2463 Fipke, C. E., 88M/2494 Firman, R. J., 88M/1002, 1602, Fischer, H., 88M/4273 Fischer, L. B., 88M/4896 Fischer, M., 88M/0575, 2097 Fischer, P., 88M/0263, 1815 Fischer, R. X., 88M/3458 Fischer, W., 88M/0464 Fisher, B. E., 88M/4295 Fisher, E. I., 88M/2290 Fisher, F. S., 88M/0361 Fisher, I. St. J., 88M/1408 Fisher, J. B., 88M/2419 Fisher, R. S., 88M/5782 Fitches, W. R., 88M/1140, 1151 Fitton, J. G., 88M/1699, 2794, 2813, 2891 Fitzgerald, M. J., 88M/1431 Fitzgerald, S., 88M/0245 Fitzgerald, W., 88M/5836 Fitzpatrick, E. A., 88M/4993 Fitzpatrick, J., 88M/3276, 4922 Fitzpatrick, J. J., 88M/6084

Fjerdingstad, V., 88M/5625 Flack, H. D., 88M/0237, 1783 Flanagan, F. J., 88M/4184 Flanagan, K. M., 88M/1558 Flannery, B. P., 88M/1663 Fleet, M. E., 88M/0945, 1810, 4753, 5091, 5150 Flegal, A. R., 88M/4183 Flegg, A. M., 88M/5191 Fleisher, M. Q., 88M/2400 Fleming, C. A., 88M/4971 Fletcher, A. B., 88M/3702 Fletcher, C. J. N., 88M/2800 Fletcher, I. R., 88M/2330 Fletcher, K., 88M/4936 Fletcher, R. A., 88M/0568 Fletcher, W. K., 88M/0887. 0914, 2495, 2502 Flexer, A., 88M/3548 Flick, H., 88M/4476 Flicoteaux, R., 88M/0178, 4655 Flier-Keller, E. Van der, 88M/ Flinn, D., 88M/4360 Flood, P. G., 88M/2697 Flood, R. H., 88M/1457, 6201 Florence, T. M., 88M/0927 Flores, R. A. L., 88M/2474 Florke, O. W., 88M/3477, 3743 Florou, H., 88M/5325 Flower, M. F., 88M/5311 Flower, M. F. J., 88M/2253, 6286 Floyd, J. D., 88M/6107 Floyd, P. A., 88M/2250, 2299, 2952 Fluck, J., 88M/5813 Fluet, D. W., 88M/2187 Flynn, J. J., 88M/0117, 1727, 1728 Foden, J. D., 88M/0680, 2246, 5653, 6416 Fodor, R. V., 88M/0737, 2930 Fogel, M. L., 88M/2420, 5887 Foland, K. A., 88M/5636, 5671 Foldvari, M., 88M/1672 Foley, N. K., 88M/0297 Folk, R. L., 88M/3257 Fonarev, V. I., 88M/5466 Fonesca, E. Cardoso, 88M/2462 Fonolla, F., 88M/6327 Fontan, F., 88M/4289 Fontbote, L., 88M/1878 Fonteilles, M., 88M/3937, 4268 Fontes, J. C., 88M/0764, 5868 Fontes, J. Ch., 88M/5744 Fontignie, D., 88M/2970, 3831 Fontugne, M. R., 88M/5906 Fookes, P. G., 88M/3613, 4623 Foord, E. E., 88M/0110, 0965, 1061, 4528 Ford, A. B., 88M/2877, 4511 Ford, D. C., 88M/3139 Ford, J. P., 88M/5026 Ford, T. D., 88M/4635 Fordham Jr, O. M., 88M/6080 Forest, R. C., 88M/6421

Forman, S. L., 88M/4913

Forn, O. P., 88M/4202

Fornari, D. J., 88M/3962 Fornes, V., 88M/5123 Forni, O., 88M/4203 Forsberg, A., 88M/3986 Forster, H., 88M/5166 Forster, K., 88M/1790 Forster, O., 88M/4787 Forstner, U., 88M/4022 Forsyth, D. W., 88M/3176 Forsythe, D. L., 88M/5594 Fort, P. Le, 88M/1277, 3948, 4459 Fort, R., 88M/5193 Fortey, N. J., 88M/2892 Fortin, G., 88M/4512 Fossen, H., 88M/1230 Foster, C. B., 88M/2435 Foster, H.-J., 88M/2635 Foster, H. L., 88M/3911 Foster, J., 88M/4197 Foster, R. P., 88M/0095, 0328, 0330, 0371, 0910 Foudoulis, C., 88M/0189 Fouillac, A. M., 88M/3890. 4084, 4685, 5628 Fouillac, C., 88M/3291, 4084, 4085, 5529 Foullac, A. M., 88M/3934 Fountain, D. M., 88M/3144 Fouquet, Y., 88M/3545 Fourcade, S., 88M/3925, 5624, 5637 Fournier, J., 88M/1802 Fournier, R. O., Fowler, A. D., 88M/1353 Fowler, B. O., 88M/5442 Fowler, J. H., 88M/3562 Fowler, M. B., 88M/0799, 3050 Fowler, M. G., 88M/5891 Fowler, S. R., 88M/4607 Fox, H., 88M/1013 Fox, L. E., 88M/5356 Fox, P. E., 88M/2483 Fox, P. J., 88M/6296 Fox Jr, K. F., 88M/6428 Fraley, C. M., 88M/3880 France-Lanord, C., 88M/1277, 3948 Francesco, M. di, 88M/4554 Franci, M., 88M/0150, 3394 Francis, A., 88M/3331 Francis, A. D., 88M/3572 Francis, C. A., 88M/4825, 4829 Francis, E. H., 88M/2826, 2827 Francis, J. G., 88M/1568 Francis, P. W., 88M/1371 Franck, S., 88M/1992, 4196 Franco, E., 88M/5486, 6094 Franco, R. Romero, 88M/0206 Franco-Herrera, A., 88M/5582, 5195 Francois, R., 88M/2418 Franczyk, K. J., 88M/2259 Frank, E., 88M/2596 Franke, T., 88M/5856 Frankel, R. B., 88M/1031 Frankie, K. A., 88M/1441 Franklin, J. M., 88M/1896, 1898

Franks, S. G., 88M/4673 Fransolet, A.-M., 88M/2666 Franssen, L., 88M/6119 Frantz, G., 88M/1721 Frantz, J. D., 88M/5396 Franz, G., 88M/1309 Franzini, M., 88M/3155 Frape, S., 88M/3823 Frape, S. K., 88M/3344, 3818, 3833, 3844, 5784, 5876 Frarey, M. J., 88M/2701 Fraser, D. G., 88M/0477, 0735 Fraser, J. Z., 88M/5306 Fratta, M., 88M/6238 Fraundorf, P., 88M/4224 Freed, R. L., 88M/6082 Freeman, C. J., 88M/5237 Freeman, E. F., 88M/0050 Freeman-Lynde, R. P., 88M/ 3179 Freer, R., 88M/1002, 5453 Freitas Carvalho, J. Tavares de, 88M/1860 Frenkel, M. Ya., 88M/0598, 3646, 5479 Frenzel, G., 88M/2909, 3069 Freshney, E. C., 88M/1415 Freund, F., 88M/5079, 5964 Freundel, M., 88M/5550 Frey, F. A., 88M/3019, 3959, 4474 Frey, M., 88M/3021, 3057, 3333, 4676, 6432 Freyssinet, P., 88M/3853 Frias, J. Martinez, 88M/5248 Frick, C., 88M/0889 Friderichsen, J. D., 88M/4871 Fridlender, N. G., 88M/2308 Fridrich, C. J., 88M/1358 Friederich, G., 88M/0655 Friedman, G. M., 88M/1439, 4048, 4668 Friedman, I., 88M/2260, 2261 Friedman, M., 88M/0514 Friedrich, G., 88M/2326, 3590 Friedrich, M. H., 88M/2197 Friedrich, W. L., 88M/0018 Friedrichsen, H., 88M/3961, 4057 Friend, C. R. L., 88M/3031, 4697, 4731 Fries, T. L., 88M/5788 Friesen, W., 88M/0736 Frihy, O. E., 88M/2301 Friis, H., 88M/6317 Frikh-Khar, D. I., 88M/2516 Frimmel, F. H., 88M/0423 Frimmel, H., 88M/1616 Fripiat, J. J., 88M/0120, 0153 Friske, P. W. B., 88M/2476, 2477 Fritsch, E., 88M/0589, 5488, 5515, 5521 Fritz, B., 88M/3827 3344, Fritz, P., 88M/0830, 3818, 3823, 3833, 5857, 5876 Fritz, S. J., 88M/0816 Fritzche, T., 88M/5088

Froelich, P. N., 88M/1683, 2363 Froese, E., 88M/3117 Frohlich, K., 88M/5856 Frolich, K., 88M/5807 Frolov, S. M., 88M/5585 Frolova, T. I., 88M/1400 Front, K., 88M/2818, 2819 Frost, B. R., 88M/1466, 4759 Frost, C. D., 88M/0738, 1466, 4759 Frost, D. M., 88M/4431 Frost, J. K., 88M/0186 Frost, K. M., 88M/6254 Frost, T. P., 88M/4532 Frostick, L., 88M/4629 Frutos, J., 88M/6307 Fry, N., 88M/6396 Fryberger, S. G., 88M/6354 Fryer, B. J., 88M/2136, 5528 Fryer, C. W., 88M/0587, 2108, 5488, 5508, 5517, 5519 Fryer, W., 88M/2101 Fu, H., 88M/5203 Fu, J., 88M/0851, 4118, 5910, 5911 Fu, M. H., 88M/5341 Fu, Y., 88M/5583 Fuchs, Y., 88M/2217, 6362 Fudali, R. F., 88M/2536 Fudral, S., 88M/6115 Fuess, H., 88M/3471, 5088. 5152 Fugzan, M. M., 88M/0930, 5948 Fuhrman, M. L., 88M/5476 Fuhrmann, R., 88M/0588 Fuhrmann, U., 88M/3190 Fujii, S., 88M/5473 Fujii, T., 88M/1322, 4598 Fujii, Y., 88M/4236 Fujimaki, H., 88M/4582 Fujino, K., 88M/3733, 5462 Fujinuki, T., 88M/1944 Fujiyoshi, A., 88M/4743 Fukuhara, M., 88M/4979 Fukunaga, K., 88M/0953 Fukunaga, O., 88M/0426, 3710 Fukuoka, K., 88M/5412 Fukuoka, M., 88M/2572, 4296, 6053 Fukuoka, T., 88M/1322 Fukushima, K., 88M/5904 Fullagar, P. D., 88M/1289 Fuller, C. C., 88M/0498, 0506 Fuller, M., 88M/1529, 5950, 3618 Fumey, P., 88M/5506 Fumey-Humbert, F., 88M/1238 Funaki, M., 88M/2438 Furey, D. J., 88M/2867 Furlong, E. T., 88M/3633, 4154 Furlong, K. P., 88M/3144 Furnes, H., 88M/2248 Furo, K., 88M/5462 Fursenko, B. A., 88M/0549 Fursov, V. Z., 88M/0894 Furst, W., 88M/0493 Furtado, S., 88M/0800

Furukawa, B. T., 88M/1345
Fusi, P., 88M/0150, 3394
Fuster, J. M., 88M/1607
Futterer, D. K., 88M/1176
Fuzuk, F. V., 88M/1035
Fyfe, C. A., 88M/0247
Fyfe, W. S., 88M/0312, 0783, 1747, 1768, 2399, 2621, 2638, 3816, 4028, 4328, 4349, 5568, 5633, 5736, 6269
Fyson, W. K., 88M/1180

Gaal, G., 88M/2676, 2677 Gaans, P. F. M. van, 88M/0923 Gaans, P. van, 88M/5847 Gaast, S. J. van der, 88M/1063 Gabell, A. R., 88M/5558 Gac, J. Y., 88M/4095-4097 Gadzeva, T., 88M/0294 Gaffey, S. J., 88M/1519 Gaffin, S., 88M/3173 Gaggero, L., 88M/1073 Gagnier, M. A., 88M/4930 Gagnol, I., 88M/0974 Gagnon, Y. D., 88M/3114 Gagny, C., 88M/0341, 3932, 4451, 4471, 4473, 6168 Gaidukova, V. S., 88M/4294 Gaiffe, M., 88M/0204 Gaillard, J. -F., 88M/2375 Gaines, A. M., 88M/0279 Gainsford, A. R., 88M/0256 Gairola, V. K., 88M/4736 Gait, R. I., 88M/2626 Gaite, J. -M., 88M/5134, 5135 Gajkowska-Stefanska, L., 88M/ 5814 Galbiati, B., 88M/4611 Galdieri, M., 88M/0766 Galetti, G., 88M/6398 Galia, W., 88M/0574 Galiana, J. Guijarro, 88M/5194, 6069 Galiano, J. Guijarro, 88M/0630, 1877 Galicia, H. F., 88M/4998 Galii, S. A., 88M/0638 Galimov, E. M., 88M/4140, 4166 Galindo, G., 88M/4999 Gall, B. le., 88M/1163 Gall, J. le, 88M/2831 Gall, M., 88M/2524 Galley, A., 88M/1898 Galli, E., 88M/3487 Galli, G., 88M/0228 Galliski, M. A., 88M/1901 Galloway, J. N., 88M/0402 Gallyamov, R. M., 88M/5643 Galuskin, E. V., 88M/2853, 4252 Gamarnik, M. Ya., 88M/3452 Gamo, T., 88M/2398, 3905 Gamond, J. F., 88M/2719

Gamyanin, G. N., 88M/4319

Ganapathy, R., 88M/2522

Gancedo, T., 88M/1660

Gandais, M., 88M/5120

Gandais, V., 88M/3417 Gandhi, S. S., 88M/1899 Gangaiya, P., 88M/5048 Ganguli, P., 88M/4990 Ganguly, J., 88M/2750, 5454 Gans, W., 88M/5408 Gao, B., 88M/0349 Gao, H., 88M/3614 Gao, S., 88M/4242 Gao, Y., 88M/4242 Gapais, D., 88M/2709, 2710, 2721 Garanin, ٧. K., 88M/3135. 3136, 4740 Garba, I., 88M/0908 Garbarino, C., 88M/6223 Garcia, A., 88M/0114 Garcia, A. R., 88M/4988 Garcia, C., 88M/5030 Garcia, D., 88M/2209 Garcia, E., 88M/5863 Garcia, J. A. Lopez, 88M/1910, 3531, 3532 Garcia, M. O., 88M/2949, 3959, 4533, 4593, 6266 Garcia Arribas, A., 88M/0234 Garcia Cacho, L., 88M/0707 Garcia Guinea, J., 88M/6473 Garcia Paz, C., 88M/0206 Garcia Rodeja, E., 88M/0205 Garcia Romero, E., 88M/6026 Garcia-Ramos, J. V., 88M/5123 Garcia-Rodeja, E., 88M/3423 Garcia-Rodeja, R., 88M/5323 Garcia-Ruiz, J. M., 88M/1989, Garcia Sanchez, A., 88M/0904, 0905, 5582 Garcia Sepulveda, I., 88M/5322 Garcia-Tenorio, R., 88M/5902 Gardavsky, V., 88M/5558 Garde, A. A., 88M/0001, 6105 Gardeweg, M., 88M/1370, 2282 Gardner, G. J., 88M/1638 Gardner, J. N., 88M/3913 Gardner, R. P., 88M/3308 Gardulski, A. F., 88M/1183 Garfield, P., 88M/5776 Gargulinski, L. K., 88M/1656 Garland, C. M., 88M/2604 Garmann, L. B., 88M/2248 Garner, C. D., 88M/5149 Garnier, J.-M., 88M/5855 Garofalini, S. H., 88M/2085 Garrels, R. M., 88M/0106, 0600, 2148 Garrett, R. G., 88M/0891 Garrett, S. W., 88M/3138 Garrigues, P., 88M/4143, 5883 Garuti, G., 88M/2629 Garven, G., 88M/0667 Garvey, R. G., 88M/0070 Garzon, J., 88M/5496 Garzon, J. C., 88M/3213 Gascoyne, M., 88M/1969, 1974, 2137, 3820 Gaspar, O., 88M/5196 Gasparik, T., 88M/0554 Gasperini, P., 88M/4558

Gat, J. R., 88M/2387, 4069, 5877 Gatineau, L., 88M/0120 Gatter, I., 88M/0305 Gaudette, H. E., 88M/4098 Gauthier, B., 88M/1417 Gauthier, J.-P., 88M/5506 Gauthier-Lafaye, F., 88M/1166 Gautier, D. L., 88M/3990 Gavrilenko, V. V., 88M/2163, 4313 Gawel, A., 88M/0159, 0193 Gawlicki, M., 88M/3391 Gawthorpe, R. L., 88M/2963 Gay Jr; S. P., 88M/6226 Gayvoronskaya, T. G., 0637 Gazda, L., 88M/2987, 2988 Gazdik, R., 88M/3861 Ge, M., 88M/1429 Gebhard, G., 88M/3343, 3684 Gee, D., 88M/0809 Geen, A. van, 88M/4091 Gehlen, K. von, 88M/3536. 4074 Gehrels, G. E., 88M/0034 Geiger, C. A., 88M/0547 Geisinger, K. L., 88M/2074 Geisler, M., 88M/0716 Geismar, G., 88M/3685, 3746 Geletiy, V. F., 88M/0532 Gelinas, L., 88M/6210 Gellermann, R., 88M/5856 Gelugne, P., 88M/2950 Gemmell, J. B., 88M/2281 Genkin, A. D., 88M/3088, 3861 Gennaro, M. de, 88M/0824, 5486, 6094 Genot, J., 88M/5320 Genshaft, Yu. S., 88M/1515 George, A., 88M/4748 George, E., 88M/2449 George, I. A., 88M/4011 George, I., 88M/0489 George, M. C., 88M/4270 Georget, Y., 88M/3055, 3925 Gerard, Y., 88M/2050 Geraskina, G. P., 88M/3704 Gerayzade, A. P., 88M/5038 Gerbasi, G., 88M/1609 Geringer, G. J., 88M/0374, 1261 Gerlach, D. C., 88M/5620 German, C. R., 88M/5847 Germs, G. J. B., 88M/6411 Gerstenberger, H., 88M/0716 Gerth, J., 88M/5420 Gervilla, F., 88M/1879 Gessler, R., 88M/4074 Gessner, M., 88M/6077 Getmanskaya, T. I., 88M/4320 Gettings, M. E., 88M/6464 Geukens, F., 88M/4638 Gewelt, M., 88M/4549 Geyer, E., 88M/1681 Geywitz, J., 88M/0423 Ghabru, S. K., 88M/3388 Ghazi-Bayat, G., 88M/3729 Ghent, E. D., 88M/5471

Ghera, A., 88M/0982, 5511 Ghergari, L., 88M/6331 Ghezzo, C., 88M/1163 Ghiara, E., 88M/0766, 2380 Ghiara, M. R., 88M/0824 Ghiorso, M. S., 88M/0462 0475, 3654, 3671, 3672 Ghiurca, V., 88M/3124 Ghomshei, M. M., 88M/0722 Ghose, S., 88M/0250, 0266 0274, 5098, 5118 Ghosh, A. K., 88M/0655 Ghosh, B., 88M/5716 Ghosh, D. N., 88M/4142 Ghosh, R., 88M/4142 Ghosh, S. B., 88M/5716 Ghosh, S. K., 88M/1171 Ghosh, S., 88M/2859 Gianfagna, A., 88M/4291 Giannini, L., 88M/4541 Giannini, W. F., 88M/6371 Giardini, A. A., 88M/3132 Gibb, F. G. F., 88M/2829 2935, 6183 Gibbons, W., 88M/0007 Gibbs, A. K., 88M/5763 Gibbs, G. V., 88M/0246, 5075 5084, 5157 Giblin, A. M., 88M/2357, 2392, 4176 Gibson, A. R., 88M/5054, 5055 Gibson, B., 88M/1498 Gibson, D., 88M/0009 Gibson, D. W., 88M/3003, 3004 Gibson, I., 88M/6287 Gibson, I. L., 88M/6213 Gibson Jr, E. K., 88M/2259 Giere, R., 88M/0973 Giese, U., 88M/1397 Giesecke, A., 88M/4464 Gieskes, J. M., 88M/2295, 4050 Giester, G., 88M/5145 Gigashvili, G. M., 88M/2429 Giger, W., 88M/5891 Giggenbach, W. F., 88M/0734, 2247, 4538 Gigson, I. L., 88M/3844 Gijbels, R., 88M/4017 Gilbert, E., 88M/1107 Gilbert, M. C., 88M/5672 Gilbert, T. D., 88M/2414 Gilde, M., 88M/3390 Gilfrich, J. V., 88M/3326 Gilkes, R. J., 88M/3386, 3424, 3425, 5034 Gill, J. B., 88M/1393, 2255, 4891, 6302 Gill, R. C. O., 88M/3033 Gill, W. N., 88M/5403 Gillain, G., 88M/4082 Gillet, P., 88M/2050, 6395 Gillham, R. W., 88M/5424 Gilligan, J. M., 88M/0371 Gilligan, L. B., 88M/1843, 1849, 1853 Gillot, P. Y., 88M/4552 Gillott, J. E., 88M/4962

Giltrap, D. J., 88M/0217, 5054, 5055 Ginderow, D., 88M/4342, 5117 Ginzburg, I. V., 88M/6014 Giordani, M., 88M/5439 Giot, D., 88M/3576, 5247 Gipey, C. D., 88M/2320 Girardeau, J., 88M/1391, 6284, 6293 Girardin, N., 88M/4605 Giraud, P., 88M/2227 Giraud, R., 88M/4342, 6086 Girdler, R. W., 88M/4848 Giresse, P., 88M/2305, 2656 Giret, A., 88M/0722, 1252, 6267 Girlin, Yu. P., 88M/2309 Girod, M., 88M/2748 Gislason, S. R., 88M/2005, 2370 Gittins, J., 88M/2787, 4890 Giudice, A. Lo, 88M/4056, 4717 Giuliani, G., 88M/1463, 3594, 4290, 5751 Giuseppetti, G., 88M/3490 Giusta, A. Della, 88M/3491 Giusti, G., 88M/2426 Given, P. H., 88M/0788, 0791, 5897, 5898 Gize, A. P., 88M/0858 Gladkov, J. G., 88M/5648 Glagola, B. G., 88M/0047 Glagolev, A. A., 88M/3091 Glahn, J. E., 88M/4930 Glasby, G. D., 88M/0655 Glasby, G. P., 88M/0357, 2326 Glass, B. P., 88M/5998 Glass, G. B., 88M/1440 Glass, G. E., 88M/4960 Glasser, F. P., 88M/3454, 3637, 3728 Glassford, D. K., 88M/6342 Glaubig, R. A., 88M/0144, 4996 Glavatskikh, S. F., 88M/1094 Glazer, A. M., 88M/1509, 1831 Glazkov, S. Yu., 88M/0517 Gleadow, A. J. W., 88M/1635 Gleason, J., 88M/2260 Gleason, J. D., 88M/6028 Gledhill, A., 88M/3960 Gleeson, C. F., 88M/0866, 0898, 1868 Gleisberg, B., 88M/5920 Glen, R. A., 88M/0354 Glendinning, N. R. W., 88M/ Glennie, K. W., 88M/4967 Glikson, A. Y., 88M/1496, 4907 Glimcher, M. J., 88M/1071 Glover, B. W., 88M/4367 Glyuk, D. S., 88M/0463 Goclawska, S., 88M/0156 God, R., 88M/1913 Godbeer, W. C., 88M/5727 Goddard, D. A., 88M/2293 Godinho, M. M., 88M/0708, 1246 Godonou, S. K., 88M/3612

Godoy, F. E., 88M/0485, 3559 Godoy, J. M., 88M/4955 Godse, V. B., 88M/5327 Godwin, C. I., 88M/4944 Goebel, E. D., 88M/3838 Goedert, W. J., 88M/0225 Goel, O. P., 88M/5745 Goel, P. S., 88M/4232 Goff, F., 88M/3913 Goffe, B., 88M/3060, 5376, 6234, 6395 Goh, K. M., 88M/5058 Goh, Tee Boon, 88M/0502 Goinhas, J. A. C., 88M/1881 Goinhas, J. A. Carvoeiras, 88M/3533 Gokhale, N. W., 88M/3096 Gokturk, H., 88M/5010 Gold, D. P., 88M/4414 Goldberg, E. D., 88M/4075 Goldberg, E. G., 88M/0590 Goldberg, S., 88M/0144, 4996 Goldberg, S. A., 88M/1289, 4531 Golden, D. C., 88M/0526 Goldfarb, R. J., 88M/2480, 2492 Goldhaber, M. B., 88M/0414, 0415 Golding, S. D., 88M/3909, 5276 Goldstein, D., 88M/0155 Goldstein, J. I., 88M/5974, 5975 Goldstein, S. 88M/5771, J., 5772 Gole, M. J., 88M/1458 Golitsyna, L. V., 88M/4139 Golodkovskaya, G. A., 88M/ 4793 Golovanova, T. I., 88M/4252 Goltzman, Y., 88M/1619 Gol'tsman, Yu. V., 88M/5647 Golyshev, S. I., 88M/5535 Gomes, C. B., 88M/2880, 6223 Gomes, C. S. F., 88M/3397 Gomez, M., 88M/1368 Gomolka, J., 88M/4529 Goncharov, G. N., 88M/2163 Goncharova, T. Ya., 88M/3541 Goncuoglu, M. C., 88M/3220 Gonfiantini, R., 88M/5875 Gong, Y., 88M/0349 Gongalyuk, N. G., 88M/5714 Gonzalez, C. R., 88M/5073 Gonzalez, M. Rodas, 88M/6026 Gonzalez Bonorino, F., 88M/ 2708 Gonzalez Casado, J. M., 88M/ 6116 88M/ Gonzalez Lodeiro, F., 6170 Gonzalez Martin, J. A., 88M/ 6236 Gonzalez Partida, E., 88M/0838 Gonzalez-Vila, F. J., 88M/5918 Gonzalo, F., 88M/5193, 5582 Gonzalo, J. C., 88M/1247 Gonzalo-Corral, F. J., 88M/ 5192

Goodarzi, F., 88M/1406, 2335, 4045, 4151, 5737 Goode, A. J., 88M/1138 Goodess, C. M., 88M/4535 Goodfellow, W. D., 88M/1869, Goodfriend, G. A., 88M/3865 Gooding, J. L., 88M/5955 Goodman, B. A., 88M/3468, 5035 Goodman, S., 88M/4125 Goodrich, C. A., 88M/2529 Goodwin, A. M., 88M/5666 Goossens, H., 88M/5914 Goossens, R., 88M/5320 Gopalan, K., 88M/0723 Gopel, C., 88M/0697 88M/2676, Gorbatschev, R., 2684, 3526 Gorbunov, G. I., 88M/3088 Gorbunov, V. Ye., 88M/5979 Gordienko, V. V., 88M/1254 Gordon, N., 88M/3639 Gordon, T. M., 88M/0039 Goreglyad, A. V., 88M/1273, 2854 Goresy, A. El, 88M/5966 Gorlich, E. A., 88M/1744 Gorlich, K., 88M/1744 Gorlitsky, B. A., 88M/3894 Gorniak, K., 88M/0173 Gorogotskaya, L. I., 88M/5388 Gorshkov, A. I., 88M/0270, 1919, 2616, 3878 Gorskaya, M. G., 88M/4249 Gosnold Jr, W. D., 88M/3971 Goss, J. A., 88M/6084 Gosson, G. J., 88M/0105 Gostin, V. A., 88M/4905 Goto, K., 88M/4505 Gottardi, G., 88M/1816, 6014 Gotzinger, M. A., 88M/0171, 1742 Gouanvic, Y., 88M/0341, 4451 Gould, J. H., 88M/0200 Goulet, N., 88M/5236 Gourgaud, A., 88M/2908 Gourley, C. S., 88M/3613 Gourlez, P., 88M/5321 Gout, R., 88M/2037, 5441, 6324 Gove, H. E., 88M/5934 Govett, G. J. S., 88M/0876, Govorova, A. V., 88M/1266 Gow, A. J., 88M/2032 Gowar, A., 88M/5910 Gowar, A. P., 88M/0851 Gowda, H. Sanke, 88M/4938 Gower, C. F., 88M/4364 Graaf, B. van de, 88M/5914 Grabczak, J., 88M/5807 Graca Costa, J. R., 88M/1936 Gracia, A., 88M/5582 Gracia-Plaza, A. S., 88M/5192 Grade, J., 88M/5017 Grady, A. E., 88M/2714 Grady, M. M., 88M/4234, 5956, 5961, 5968

Grady, S. J., 88M/2295 Graeser, S., 88M/2631, 2660 Grafchikov, A. A., 88M/5466 Gragnani, R., 88M/0766, 2380 Graham, A. L., 88M/0936 Graham, C. M., 88M/0563 Graham, I. J., 88M/4587 Graham, J., 88M/4343 Graham, J. M., 88M/5930 Graham, J. R., 88M/4636 Graham, J., 88M/1044-1046 Gramlich, V., 88M/3441 Grana, J., 88M/5323 Granat, K., 88M/3401 Grandjean, P., 88M/2304, 5817 Grandstaff, D. E., 88M/4414 Granger, H. C., 88M/5174 Grant, J. A., 88M/0932 Grant, N. K., 88M/1291 Grant, S. K., 88M/6276 Grant, S. M., 88M/5758 Grantham, G. H., 88M/6121 Grantham, P. J., 88M/4137 Grapes, R., 88M/1395, 4748 Grapes, R. H., 88M/0357, 4245 Grattan-Bellew, P. E., 88M/ 2442 Gratzer, R., 88M/0802 Grauert, B., 88M/4899 Grave, E. De, 88M/5111 Gray, C. M., 88M/4064 Gray, J., 88M/0660, 2187, 5537 Gray, J. E., 88M/2490 Gray, V. R., 88M/0776, 5726 Graybeal, F. T., 88M/5602 Graziani, G., 88M/5492, 5511 Greco, A., 88M/3075 Greeley, R., 88M/0933, 0934 Green, A. A., 88M/5558 Green, D. H., 88M/0472, 0473, 1374, 3640, 5392, 5400, 6297, 6299 Green, D. I., 88M/1562 Green, N. L., 88M/4526 Green, P. F., 88M/4330 Green, T. H., 88M/2070 Green, W. J., 88M/5831, 5837 Green II, H. W., 88M/4760 Greenberg, J. P., 88M/0437 Greenhough, J. D., 88M/6208 Greenland, L. P., 88M/1344-1346 Greenough, J. D., 88M/2911, 4912 Greensmith, J. T., 88M/3998 Greenwood, H. J., 88M/3794 Gregnanin, A., 88M/4267 Gregoire, D. C., 88M/1682, 4181 Gregorkiewitz, M., 88M/0562, 5114 Gregory, J. G., 88M/0108 Gregory, M. R., 88M/1330, 3260 Gregory, P. W., 88M/5272 Gregory, R. G., 88M/1966 Gregory, R. T., 88M/0484, 3788 Greig, D. D., 88M/5284

Greiner, D. J., 88M/1079 Gresta, S., 88M/4556 Grew, E. S., 88M/0985, 1499, 6012 Grey, I. E., 88M/0272, 2661 Grice, J. D., 88M/1093, 1834, 4845 Grichuk, D. V., 88M/5387 Grieken, R. E. Van, 88M/0073, 1661, 4959 88M/0419, Grieken, R. Van, 2312 Grieve, R. A. F., 88M/0968, 4795 Griffin, W. L., 88M/1127, 1328, 2739, 2751, 2761, 2808, 3956, 3957, 4873 Griffiths, D. R., 88M/5885 Griffiths, R. W., 88M/1185, 4463 Grigor'yev, N. A., 88M/2343, 5556 Grigor'yeva, T. V., 88M/3752 Grillo, S. M., 88M/2463 Grimalt, J., 88M/0842, 2427 Grimbeek, U., 88M/1679 Grimes, K. G., 88M/1636 Grimes, N. W., 88M/5137 Grimm, C., 88M/4184 Grimm, L., 88M/2635 Grinchuk, D. V., 88M/5353 Grinenko, L. N., 88M/2233, 3942 Grinenko, V., 88M/3892 Grinenko, V. A., 88M/5474 Griscom, D. L., 88M/2536 Grissom, G., 88M/4120 Grissom, G. C., 88M/0991 Grist, A. M., 88M/3244 Grist, N., 88M/2112 Griveaud, P., 88M/1162 Groat, L. A., 88M/1829, 3464, 4344 Grocott, J., 88M/2812, 6377 Grodzicki, A., 88M/2608 Groessens, E., 88M/4642 Grogna, J., 88M/4707 Gromet, L. P., 88M/2671, 3032 Grondin, D., 88M/0410 Gronlie, A., 88M/4375 Gronlund, T., 88M/1929 Grooms, D. G., 88M/2949 Groos, A. F. K. van, 88M/ 0138, 0560, 3361 Groot, D. R., 88M/4947 Grootes, P. M., 88M/2454 Gros, Y., 88M/3579 Gross, E., 88M/6305 Gross, G. A., 88M/0299, 3516 Gross, S., 88M/2649 Gross, T. F., 88M/4666 Grossman, E. L., 88M/0816 Grossman, J. N., 88M/4211 Grossman, L., 88M/0946, 5954 Grosz, A. E., 88M/3610 Grousset, F. E., 88M/5691 Grove, T. L., 88M/0459 Groven, J. P., 88M/3312

Groves, D. I., 88M/0320, 0321, 1891, 2177, 3909, 4352, 6254 Grozdanov, L., 88M/1480 Gruau, G., 88M/4907 Grubesi, O., 88M/1837 Gruenewaldt, G. von, 88M/1195 Grumstone, L. R., 88M/6128 Grun, R., 88M/0049 Grunder, A. L., 88M/1372 88M/1582, Grundmann, G., 1615 Grundy, H. D., 88M/1694, 5085 Grunhagen, G., 88M/1487 Grunin, V. S., 88M/0523 Gruza, V. V., 88M/5350 Gryc, G., 88M/6494 Grzesczyk, A., 88M/6264 Grzymek, J., 88M/3391 Gu, G., 88M/1280 Gu, J., 88M/6194 Gu, X., 88M/6125 Guadalix, M. E., 88M/5039 Guan, R., 88M/1823 Guasparri, G., 88M/1249 Gubbins, D., 88M/6454, 6455 Gubelin, E., 88M/3779, 5492, 5511 Gudkova, I. V., 88M/0694 Gudmundsson, A., 88M/4548 Gueniot, B., 88M/2511 Guerange-Lozes, J., 88M/6233 Guerin, D. M. A., 88M/3378 Guerin, H., 88M/0703, 4288 Guerrak, S., 88M/3543 Guest, J. E., 88M/1304, 2897 Guest, R. N., 88M/0400 Guggenheim, S., 88M 0255, 0560, 3361, 5115 88M/0138, Guha, J., 88M/3600, 3824 Guha, S., 88M/5717 Guijarro Galiana, J., 88M/5194, 6069 Guijarro Galiano, J., 88M/0630, 1877 Guilhaumou, N., 88M/2133, 2153 Guillot, P.-L., 88M/6115 Guillou, J. J., 88M/3099, 6310 Guimon, R. K., 88M/4214 Guinea, J. Garcia, 88M/6473 Guiraud, M., 88M/1497, 4710 Guise, P., 88M/4868 Guiseppeti, G., 88M/5154 Guitard, C., 88M/4714 Guitard, G., 88M/3937 Guitard, M., 88M/5153 Guitian Rivera, F., 88M/0617, 6058 Gulacar, F. O., 88M/0840, 0841 Gul'bin, Yu. L., 88M/0640 Guldman, S. G., 88M/4674 Gul'ko, N. I., 88M/5754 Gulson, B. L., 88M/0649, 2175, 2468 Gunatilaka, A., 88M/4327, 4624 Gunawardena, R. P., 88M/5561 Gunawardene, M., 88M/5499 Gunawardene, R. P., 88M/3456

Gunay, E., 88M/4569 Gundlach, H., 88M/3558 Gundogdu, M. N., 88M/1423 Guner, Y., 88M/1315 Gungor, N., 88M/3282 Gunia, P., 88M/2839, 4722 Gunnlaugsson, E., 88M/3801 Gunter, M., 88M/1668 Gunthert, A., 88M/2596 Guo, A.-L., 88M/4902 Guo, K., 88M/1720 Guo, Y., 88M/2862 Gupta, A. K., 88M/5392 Gupta, C. S., 88M/4657 Gupta, L. N., 88M/6188 Gupta, M. L., 88M/2904 Gupta, M. P., 88M/2033 Gupta, N. L., 88M/4699 Gupta, P. K. S., 88M/0266, 0274, 3484 Gupta, P., 88M/6245 Gurbanov, A. G., 88M/2162, 2234, 5576 Gurevich, V. M., 88M/5979 Gurgey, K., 88M/4134 Gurina, N. V., 88M/2164 Guriyeva, S. M., 88M/0770 Gurker, N., 88M/3302 Gurney, G. G., 88M/4048 Gurney, J. J., 88M/0612, 2763, 3014, 5560 Gurvich, M. Yu., 88M/3866 Gurvich, Ye. G., 88M/5806 Gusa, S., 88M/2917 Gushchin, V. N., 88M/2344 Gust, D. A., 88M/1996 Gustavsson, N., 88M/0595 Gustin, M. M., 88M/1445 Gutierrez, A. Moreno, 88M/ 0630, 5018, 5194, 6069 Gutierrez Claverol, M., 88M/ 1765 Gutierrez Maroto, A., 88M/ 0630, 1877, 5194, 6069 Guven, N., 88M/0195 Gwanmesia, G., 88M/3710 Gwozdz, R., 88M/2326

Haack, U., 88M/2647 Haapala, I., 88M/2817, 2818 Haas, G. J. L. M. de, 88M/ 3734 Haas, J., 88M/2981, 4765 Habermehl, M. A., 88M/3955 Hach-Ali, P. Fenoll, 88M/1879 Hackett, D., 88M/0912 Hackett, W. R., 88M/4586. 6257 Haddad, R. I., 88M/4159 Hadj-Amara, A. Ben, 88M/3367 Haendel, D., 88M/2350 Haenel-Remy, S., 88M/2223 Hafeez, M. A., 88M/1865 Haffty, J., 88M/5292 Hafner, S. S., 88M/5119 Hagee, B. E., 88M/0509

Haggerty, S. E., 88M/027 1024, 2778, 3015 Hahn, T., 88M/0098 Hahne, E., 88M/4783 Haines, P. W., 88M/4905 Hajash, A., 88M/0501 Hajri, J. El, 88M/3715 Hakansson, K., 88M/5314 Hakkinen, A.-M., 88M/0797 Halbach, P., 88M/3517 Halbig, J. B., 88M/0219 Halbout, J., 88M/0951, 0951 4223 Hald, N., 88M/6231 Halden, N. M., 88M/3046 Hale, C. J., 88M/3134 Hale, M., 88M/0878 Hale, P. B., 88M/3609 Hale, W. E., 88M/5665 Halenius, U., 88M/6068 Halgedahl, S. L., 88M/1530 Halicz, L., 88M/4994 Hall, A., 88M/3922, 5610 Hall, A. J., 88M/2825, 3991 Hall, C. M., 88M/3187, 3209 3216 Hall, D., 88M/5595 Hall, D. L., 88M/5540 Hall, G. E. M., 88M/5738, 5943 Hall, J., 88M/0103 Hall, J. M., 88M/1547, 4295 Hall, P. O. J., 88M/5798 Hall, R., 88M/4614, 4618, 6126 Hall, R. P., 88M/3031, 5623 Hallam, A., 88M/4858 Hallbauer, D. K., 88M/1863 Halleux, R., 88M/5320 Halley, R. B., 88M/5542 Halliday, A. N., 88M/0009, 2203, 4868, 4879 Halloran, J. W., 88M/5381 Halls, H. C., 88M/3968, 6181, 6212 Hallworth, M. A., 88M/1203, 2886 Halpern, H. I., 88M/4156 Halter, G., 88M/3245 Haluszczak, A., 88M/1743 Harnad, M., 88M/2054 Hamamoto, R., 88M/2132 Hameurt, J., 88M/3034 Hamilton, D. L., 88M/0465 1375, 2027 Hamilton, L. H., 88M/5188 5264 Hamilton, M. A., 88M/1293 Hamilton, P. J., 88M/0005 1135, 2816, 3998, 5696 Hamilton, S. E., 88M/4152 Hamilton, W., 88M/4850 Hamilton, W. L., 88M/1360 Hamilton-Taylor, J., 88M/4009 Hammer, C., 88M/0955 Hammer, C. V., 88M/0018 Hammer, J., 88M/0632, 5920 Hammergren, P., 88M/3920 Hammerschmidt, K., 88M/0015 Hammond, D. E., 88M/0837

1983

Hammond, R. L., 88M/6128 Hamza, M. S., 88M/5860 Hamza, S. M., 88M/2057 Hamzah, Y., 88M/3555 Han, F., 88M/1088 Han, G., 88M/3233 Han, J., 88M/3126 Han, S., 88M/1796 Hanan, B. B., 88M/2515 Hancock, P. L., 88M/2715 Handley, G. A., 88M/5266 Hanes, J. A., 88M/4864 Hanic, F., 88M/3724 Hank, R. A., 88M/2121 Hanmer, S., 88M/4693 Hann, H. P., 88M/4723 Hanna, G. L., 88M/5880 Hanna, P. J., 88M/1685 Hanni, H. A., 88M/0575, 2097 Hannington, M. D., 88M/0300, 5569 Hanor, J. S., 88M/3025 Hans, S. K., 88M/4389, 4390 Hansen, B. T., 88M/4866, 4869, 4870, 4871, 4878 Hansen, E. C., 88M/1122, 1492 Hansen, F. D., 88M/2047 Hansen, S., 88M/6068 Hansen, U., 88M/4412 Hanson, G. N., 88M/0077, 0724, 3969 Hanson, R. E., 88M/5752, 6220 Hanson Jr, A. K., 88M/5846 Hansuld, J. A., 88M/0866 Hanus, V., 88M/2706, 4854 Hanykyr, V., 88M/0128 Hao, J., 88M/0642, 4856 Haque, M.-U., 88M/2947 Harada, K., 88M/5338 Harahap, B. H., 88M/5654, 6197 Harakal, J. E., 88M/0043 Haraldsson, C., 88M/5804 Hardenby, C., 88M/3039 Harder, H., 88M/2096 Harding, R., 88M/3330 Harding, R. R., 88M/2102, 3771, 4468 Hare, P. E., 88M/5887 Hargett, D. R., 88M/5488 Hargittai, I., 88M/0230 Hargittai, M., 88M/0230 Harkonen, I., 88M/0315 Harley, S. L., 88M/1500, 3112 Harlow, G. E., 88M/0971 Harman, M., 88M/1750 Harmer, R. E., 88M/1257, 5753 Harmer, R. E. J., 88M/0677 Harmon, R. S., 88M/0563, 0735, 4930 Harnova, J., 88M/2365 Harpoth, O., 88M/2150 Harries, J. R., 88M/1960 Harrington, C. D., 88M/3198 Harrington, H. J., 88M/6127 Harrington, J. R., 88M/0404 Harris, C., 88M/2793

Harris, D. C., 88M/2630, 2632

Harris, D. W., 88M/3741 Harris, J. W., 88M/0612, 2765 Harris, M., 88M/5190, 5924 Harris, N. B. W., 88M/0591, 1126, 5755 Harris, P., 88M/6156 Harris, P. M., 88M/3572 Harris, R. A., 88M/3249 Harris, R. E., 88M/1930, 1935, 1941, 1947-1950, 3611, 3848, 5309 Harris, W. G., 88M/1778, 3431, 5062 Harrison, R. K., 88M/4468 Harrison, R. M., 88M/0926 Harrison, S. C. S., 88M/3622 Harrison, T. M., 88M/2276, 3232, 4863 Harrison, T. N., 88M/3205 Harrison, W. J., 88M/4675 Hart, M., 88M/3322, 5067 Hart, R. A., 88M/2943 Hart, R. J., 88M/2943, 5176 Hart, S. R., 88M/5669 Hart, W. K., 88M/0679 Harte, B., 88M/2775, 3014 Hartley, J. S., 88M/5272 Hartman, H., 88M/0091 Hartman, H. L., 88M/1706 Hartman, J. S., 88M/0252, Hartman, P., 88M/1835 Harvey, B. R., 88M/5939 Harvey, H. R., 88M/4128 Harvey, P. K., 88M/0596, 3960 Harvie, C. E., 88M/0437 Hasan, F. A., 88M/2519 Hasan, M. Z., 88M/3288 Hase, U., 88M/4939 Haselton Jr, H. T., 88M/2068 Hashimoto, A., 88M/0946 Hashimoto, H., 88M/0529, 1823 Hashimoto, M., 88M/4746 Hashimoto, T., 88M/4954 Haslam, C. O., 88M/5208 Hassan, H. H., 88M/5665 Hassan, I., 88M/6045 Hatar, J., 88M/3094 Hatcher, P. G., 88M/0843. 2451 Hathon, L. A., 88M/5785 Hatton, A., 88M/0190 Hatton, C. J., 88M/2763, 4414 Hattori, I., 88M/2990 Hattori, K., 88M/0869, 3994 Hatzfeld, D., 88M/6463 Hatzipanagiotou, K., 88M/4247 Haukvik, L., 88M/1194 Hausel, W. D., 88M/3563 Hautala, T., 88M/2561 Haven, H. L. Ten, 88M/0825, 0850, 1419, 4121, 5903 Havette, A., 88M/0703 Havlicek, J., 88M/0521 Havrda, J., 88M/0128 Havskov, J., 88M/1591 Hawke, B. R., 88M/4189 Hawke, D. J., 88M/5355 Hawkes, J. R., 88M/3572

Hawkesworth, C. J., 88M/0591, 0711, 1126, 1707, 2767, 2781, 3015-3017, 3960, 5615 Hawkins, A. B., 88M/4623 Hawkins, J. W., 88M/5659 Hawkins, P. J., 88M/5025 Hawson, C. A., 88M/2825 Hawthorne, F. C., 88M/0252, 1084, 1095, 1799, 1808, 1827, 1829, 1836, 3464 Hay, R. L., 88M/4674 Hay, R. S., 88M/2049 Hayakawa, Y., 88M/1322 Hayashi, H., 88M/4985 Hayashi, K .- I., 88M/4321 Hayashi, T., 88M/1725 Hayba, D. O., 88M/0297, 6084 Haydon, R. C., 88M/0384 Hayes, J. M., 88M/2446 Hayes, K. F., 88M/3299 Hayes, T. S., 88M/0387 Haymet, A. D. J., 88M/0461 Haymon, R., 88M/0654 Haynes, B. W., 88M/0485, 3559 Haynes, D. W., 88M/0625 Haynes, F. M., 2504, 5538 88M/0665, Haynes, P. S., 88M/2491 Haynes, S. J., 88M/2182, 2330 Hazai, I., 88M/2427 Hazeldene, R. K., 88M/0385 Hazen, R. M., 88M/1511, 1513, 5097, 6438 Hazlett, R. W., 88M/2928 He, G.-Z., 88M/2747 He, L., 88M/4504 He, Y., 88M/2169 He, Z., 88M/0642, 0853 Head, J. W., 88M/4208 Heald, P., 88M/0297 Healy, J. H., 88M/4791 Heaman, L. M., 88M/4912 Hearn, B. C., 88M/2735 Hearn Jr, P. P., 88M/0607 Hebeda, E. H., 88M/5550 Hebert, D., 88M/5856 Hebert, R., 88M/4617 Hedge, G. V., 88M/3096 Hedge, V. S., 88M/6336 Hedges, J. D., 88M/1931 Hedges, J. I., 88M/4152 Hee, S. S. Q., 88M/4948 Hees, E. van, 88M/5528 Heesterman, L. J. L., 88M/ 5255 Hegarty, K. A., 88M/6498 Heger, G., 88M/5158 Heggie, D., 88M/0820, 2453 Heggie, M., 88M/5120 Hegner, E., 88M/2257, 4571 Heidecker, E. J., 88M/5211 Heider, F., 88M/1521, 1523, 5416, 6442 Heimann, R. B., 88M/5796 Heimlich, R. A., 88M/6216 Hein, J. R., 88M/3910 Heine, V., 88M/1787 Heitzmann, P., 88M/1473, 3063 Heizler, M. T., 88M/4863

Hejda, P., 88M/1527 Hekinian, R., 88M/1398 Helbig, S. R., 88M/0395 Helgeson, H. C., 88M/3327, 3680, 3731, 3796, 3806 Helios-Rybicka, E., 88M/0174 Heller-Kallai, L., 88M/3351, 3352, 4994 Hellingwerf, R. H., 88M/0338, 3856, 3920 Hellner, E., 88M/3438, 3729, 5151 Helms, T. S., 88M/4757 Helmy, A. K., 88M/4989 Helsper, G., 88M/3160 Helvaci, C., 88M/3604 Helz, G. R., 88M/3619 Helz, R. T., 88M/1219, 1342, 1343, 4591 Hem, J. D., 88M/0525 Hemingway, B. S., 88M/0570, 2062, 2068, 3770, 5459 Hemley, R. J., 88M/0432 Hemond, Ch., 88M/5624 Hemond, H. F., 88M/0831 Henderson, C. M. B., 88M/ 2080, 2829, 5671, 5220 Henderson, J. B., 88M/2702 Henderson, P., 88M/0597 Henderson Jr, W. A., 88M/2604 Hendricks, D. M., 88M/3427, 3428 Hendry, G. L., 88M/2204, 2823 Hengst, M., 88M/0632 Henkel, H., 88M/2686 Henley, R. W., 88M/5562 Henn, U., 88M/0576, 5498 Henn, V., 88M/5504 Hennessy, J., 88M/5407 Henniq, H., 88M/4814 Hennig-Michaeli, C., 88M/0513 Henning, W., 88M/0047 Henrich, V. E., 88M/0229 Henriksen, A., 88M/2371 Henriksen, N., 88M/4869 Henry, B., 88M/4354 Henry, C. D., 88M/3970, 4436, 6278 Henry, D. A., 88M/6074 Hensel, H. D., 88M/6204 Hensen, B. J., 88M/2864, 4730 Herbert, H. K., 88M/5566, 5603 Herczeg, A., 88M/5343 Herczeg, A. L., 88M/1597 Herd, R. K., 88M/0985, 3120 Hering, J. G., 88M/0925 Herman, J. S., 88M/0507, 0785, Hermann, H., 88M/1789 Hernandez, R. Lunar, 88M/0342 Hernandez-Pacheco, A., 88M/ 6236 Herrera, J. V., 88M/1223 Herrero, C. P., 88M/5114 Herrero, J. M., 88M/1909 Herring, D. P., 88M/3298 Herrmann, A. G., 88M/3638 Herrmann, W., 88M/0356

Hertogen, J., 88M/2229, 2528, 6151 Herve, M., 88M/1657 Hervig, R. L., 88M/0978, 1784, 2541 Herzberg, C., 88M/5639 Herzberg, C. T., 88M/0469, Herzog, G. F., 88M/4210, 5972 Hess, J. C., 88M/3190, 3193 Hess, J. W., 88M/4930 Hesse, K.-F., 88M/3480, 5096 Hesse, R., 88M/0756, 0813, 1435 Hetherington, C. J. D., 88M/ Hetherington, E. A., 88M/5783 Heuer, A. H., 88M/0553 Heughebaert, J.-C., 88M/2054, 5442 Heumann, K. G., 88M/2524 Heune, R. von, 88M/4852 Hewitt, A. E., 88M/5049 Heyden, P. van der, 88M/2874 Heyen, G., 88M/5349 Heyl, A. V., 88M/1061, 1585 Heys, G. R., 88M/5185 Heywood, W. W., 88M/1651, 1652 Hibbard, J., 88M/4370 Hickel, B., 88M/5605 Hickey, L. J., 88M/1653 Hickey-Vargas, R., 88M/5660, 5677 Hickley, J. J., 88M/0042 Hickman, A. H., 88M/4907 Hickman, S. H., 88M/5436 Hicks, J., 88M/0317 Hickson, C. J., 88M/4944 Hidasi, J., 88M/1418 Hidayat, S., 88M/4618, 6126 Hider, R. N., 88M/5336 Hietanen, A., 88M/2875, 6011 Higashino, T., 88M/2128 Higgins, A. K., 88M/4361, 4870 Higgins, N. C., 88M/5594 Higgitt, S. R., 88M/4865 Higgs, K., 88M/2968 Higgs, N., 88M/2293 Higgs, W. G., 88M/1105 Higgy, E. S. M., 88M/0518 Higuera-Gundy, A., 88M/2923 Hijssen, T., 88M/0655 Hilde, T. W. C., 88M/6497 Hildebrand, R. S., 88M/0678 Hildernbrand, T. G., 88M/0365 Hildreth, W., 88M/1372, 4595, 5682 Hill, E., 88M/4434 Hill, G. R., 88M/0862 Hill, I. A., 88M/4786 Hill, J. D., 88M/6209 Hill, K. C., 88M/6498 Hill, R., 88M/5529

Himmelberg, G. R., 88M/1285 Hines, M. E., 88M/4098 Hinkley, T. K., 88M/6275 Hinton, R. W., 88M/5947, 6422 Hinz, D. W., 88M/0816 Hiorns, A. G., 88M/3465 Hirabayashi, J., 88M/6238 Hirabayashi, J.-i., 88M/1761 Hirai, H., 88M/4608 Hiraide, M., 88M/1692 Hirano, H., 88M/1944 Hirn, A., 88M/4605 Hirschberg, D. J., 88M/1951 Hirschmann, G., 88M/3161 Hirschmann, M. M., 88M/6052 Hirt, S. M., 88M/6216 Hiruta, K., 88M/5406 Hitchen, K., 88M/1137 Hites, R. A., 88M/3633 Hitterman, R. L., 88M/4765 Hjelt, S. E., 88M/2675 Hladky, G., 88M/4278 Hlava, P. F., 88M/4345 Ho, R. A., 88M/4593 Ho, S. E., 88M/4352 Hobbs, B. E., 88M/1846 Hobbs, J. B. M., 88M/1484 Hobson, G. D., 88M/1414 Hochella Jr, M. F., 88M/3741 Hochleitner, R., 88M/1573, 2100, 3164 Hochman, M. B. M., 88M/2322 Hock, V., 88M/2936-2938 Hodder, A. P. W., 88M/3557 Hodder, R. W., 88M/0360 Hodeau, J.-L., 88M/5144 Hodge, V. F., 88M/0590 Hodges, D. J., 88M/0323 Hodges, K. V., 88M/0429 Hodgkinson, A., 88M/3782, 5497 Hodgson, A. A., 88M/1700 Hodgson, I. H., 88M/1956 Hodgson, K. O., 88M/3299 Hodkinson, I., 88M/5275 Hodson, R. E., 88M/2420 Hoefs, J., 88M/2234, 3992, 4065, 5574 Hoek, J. van, 88M/3478 Hoek Ostende, E. R. van den, 88M/6326 Hoernes, S., 88M/5525 Hoernes, St., 88M/5749 Hoeve, J., 88M/2334 Hoffert, M., 88M/0651, 2324 Hoffman, E. L., 88M/5921 Hoffman, P. F., 88M/0678 Hoffman, R., 88M/5109 88M/0870, Hoffman, S. J., 2483, 2484, 3849 Hoffmann, C. F., 88M/2435, 5562 Hoffmann, E. L., 88M/0917 Hofmann, A. W., 88M/0482, 2216, 2272, 5532, 5671 Hofmeister, A. M., 88M/5087 W., Hofmeister, 88M/1828, 5161 Hofstra, A. H., 88M/5607

Hogarth, D. D., 88M/6075 Hohenberg, C. M., 88M/4226 Hoinkes, G., 88M/3071 Hoisch, T. D., 88M/1462 Holcomb, R. T., 88M/0736, 1337 Holdaway, M. J., 88M/6422 Holden, P., 88M/2203 Holdren Jr, G. R., 88M/2007 Holdsworth, R. E., 88M/4704 Holdway, D. A., 88M/1963 Holenyi, K., 88M/3449 Holgado, M. J., 88M/1735 Holl, R., 88M/3892 Hollabaugh, C. L., 88M/2544 Holland, H. D., 88M/0760, 3871, 5893 Holland, L., 88M/0422 Holland, T. J. B., 88M/5364 Hollis, G., 88M/3293 Hollis, J. D., 88M/1328 Hollister, L. S., 88M/0991, 5546 Hollocher, K., 88M/1502, 4756 Holloway, J. R., 88M/0481, 1297, 2866, 3666, 5373, 5375 Holm, N. G., 88M/2619, 5315 Holm, P. M., 88M/4866, 6149 Holmes, C. W., 88M/0795 Holomany, M., 88M/3272 Holser, W. T., 88M/0755, 2288, 5706 Holton, R. L., 88M/0835 Holtta, F., 88M/3043 Holtz, F., 88M/0013 Holtzapffel, T., 88M/0160 Holyland, P. W., 88M/5279 Holzbecher, J., 88M/5967 Hon, M. H., 88M/5468 Honda, M., 88M/1597, 5969 Honeyman, B. D., 88M/4111 Hong, X., 88M/4508 Honjo, N., 88M/0744 Honjo, S., 88M/0865 Honnorez, J., 88M/3679 Hood, P. J., 88M/6207 Hooper, G. J., 88M/5217 Hoover, D. S., 88M/2417 Hoover, J. D., 88M/1210 Horak, J. M., 88M/6066 Horan, M. F., 88M/3969 Hori, M., 88M/2142 Horikawa, M., 88M/3733 Horita, J., 88M/4069, 4073 Horiuchi, H., 88M/0249, 5165 Horiuchi, T., 88M/0994, 3261 Horn, E. E., 88M/3593 Horn, H., 88M/6225 Horn, H. A., 88M/6222 Horn, P., 88M/5994 Hornung, G., 88M/2776 Horowitz, A. J., 88M/3977, 5340 Horsky, S., 88M/4936 Horsky, S. J., 88M/4944 Horst, W., 88M/3473 Horte, C.-H., 88M/1724, 3371 Horton, A., 88M/1414

Horton Jr. J. W., 88M/4915 Horvath, Z. A., 88M/6406 Horvath, E., 88M/4565 Horvath, I., 88M/1750, 4253 Horz, F., 88M/0944 Hosaka, M., 88M/2081-20 5510 Hosie, D. J., 88M/2532 Hosking, K. F. G., 88M/6049 Hoskins, E. R., 88M/4771 Hoslin, R., 88M/5321 Hosoya, S., 88M/5086 Hospers, J., 88M/1136 Hossner, L. R., 88M/1442 Hosterman, J. W., 88M/418 Hostetler, C. J., 88M/0440 Hou, Z., 88M/3279 Houghton, B. F., 88M/458 6257 Houlier, B., 88M/5448, 6436 House, W. A., 88M/3764, 543 Houseknecht, D. W., 88M/578 Houten, F. B. Van, 88M/2957 Hovath, I., 88M/0567 Howard, J. M., 88M/4430 Howard, K. A., 88M/2917 Howard, K. W., 88M/1922 Howard-Williams, C., 88M/533 Howd, F. H., 88M/0918 Howell, G. N., 88M/1685 Howells, M. F., 88M/289 2895 Hower, J. C., 88M/1441 Howes, B. L., 88M/0832 Howett, N. M., 88M/6042 Howie, R. A., 88M/4836 Howorth, R., 88M/1395 Howson, M. R., 88M/5438 Hoy, T., 88M/2479 Hrncarova, M., 88M/3860 Hrouda, F., 88M/4789 Hsu, P. H., 88M/4973 Hsui, A. T., 88M/1555 Hu, K. Y., 88M/0403 Hu, S., 88M/3235, 3236 Hu, W., 88M/0350 Hu, X., 88M/4007 Hua, Y., 88M/2172 Huang, B., 88M/5589 Huang, D., 88M/2170 Huang, E., 88M/3748 Huang, F., 88M/3950 Huang, G., 88M/5590 Huang, K., 88M/6019 Huang, P. M., 88M/0502, 177 3389 Huang, S., 88M/1552, 3597 Huang, T. C., 88M/3322 Huang, W. W., 88M/3625 Huang, Y., 88M/0085, 4240 Huang, Z., 88M/2906 Huang, Z. Q., 88M/1686 Hubbard, C. R., 88M/103 3274, 3446, 4286, 4923 Hubbard, F., 88M/2820 Hubbard, H. B., 88M/1308

Hill, R. E. T., 88M/1458

Hill, R. G., 88M/0222

Hill, R. J., 88M/3270

Hill, R. L., 88M/3755

Himes, V. L., 88M/1788

Hubener, J. A., 88M/5299 Huchon, P., 88M/4852 Hudier, E., 88M/6311 Hudson, A., 88M/2453 Hudson, B., 88M/4226 Hudson, H. A., 88M/1685 Hudson, J. D., 88M/1408 Hudson, K. A., 88M/2186 Huebert, B., 88M/2883 Huebner, W. F., 88M/0961 Huertas, F., 88M/3354 Huertas Coronel, M. J., 88M/ 1242

Huff, W. D., 88M/0186, 4986 Hughes, A. D., 88M/2965 Hughes, D. J., 88M/3031, 5623 Hughes, D. W., 88M/5987 Hughes, J. D., 88M/3000, 5419 Hughes, J. M., 88M/1083, 2662, 2663, 6022, 6091 Hughes, R. W., 88M/3774, 3777

Huh, C.-A., 88M/0794, 5844 Huhma, H., 88M/2201, 3042 Huizenga, D. L., 88M/5846 Huizinga, B. J., 88M/0863 Hul, H. J. van den, 88M/0922, 2946

Hulbert, M. H., 88M/3384 Hulen, J. B., 88M/3913 Hull, A. B., 88M/3768 Hull, J. R., 88M/3768 Hull, V., 88M/4092 Hulme, T. M., 88M/6344 Hulsebosch, T. P., 88M/4759 Hulston, J. R., 88M/5828 Humayun, M., 88M/4061, 4499 Hume, T. M., 88M/5334 Humler, E., 88M/6291 Hummel, W., 88M/0276, 6449 Humphrey, J. D., 88M/6356 Humphrey, R., 88M/2621 Humphreys, F. J., 88M/6101 Humphreys, H. C., 88M/1167 Hung, P. Q., 88M/1744 Hunger, H .- J., 88M/2635 Hunt, P. A., 88M/0039 Hunter, D. R., 88M/3087 Hunter, K. A., 88M/0828, 5355, 5830

Hunter, R. H., 88M/1200, 2740, 4466 Huntsberger, T. L., 88M/3125 Hunziker, J. C., 88M/1611,

2216, 4680 88M/1202, Huppert, H. E., 1203, 2029, 2886

Hurdley, J., 88M/5170 Hurford, A. J., 88M/1611, 4893 Hurich, C. A., 88M/4797 Hurlburt Jr, C. S., 88M/4965 Hurst, S. D., 88M/5786

Hus, J. J., 88M/1538 Husain, A., 88M/2314 Husebye, E. S., 88M/3150 Hussain, N., 88M/0488 Hussain, S. A., 88M/1921 Hussain, S. M., 88M/6123

Huston, D. L., 88M/5280

Hutagalung, J., 88M/0646

Hutcheon, I. D., 88M/4218, 4219, 4221 Hutchinson, D. S., 88M/5226 Hutchinson, J., 88M/3205 Hutchinson, M. F., 88M/0129 Hutchinson, R. W., 88M/0319 Hutchison, J. L., 88M/0239 Hutchison, R., 88M/0936, 0950 Hutton, A. C., 88M/4626 Hutton, J. T., 88M/0031 Hutton, M., 88M/3617 Huxtable, J., 88M/1595 Hwang, S.-L., 88M/5139 Hyde, B. G., 88M/0546, 3725, 4314 Hyndman, D. W., 88M/6426 Hynes, A., 88M/1110, 6421 Hytonen, K., 88M/2561

Iaacarino, S., 88M/1606 Iacconi, P., 88M/2542 Iazar, I., 88M/6178 Ibaragi, K., 88M/5259 Ibarrola, E., 88M/1607 Ibrahim, E. M., 88M/1481 Ichikawa, M., 88M/0238 Igarashi, G., 88M/5834, Igareshi, G., 88M/5822 Iglesias Ponce de Leon, M., 88M/1605 Ignatenko, K. I., 88M/5567 liyama, T., 88M/1172, 2546 Ikawa, H., 88M/5406 Ike, E. C., 88M/2798 Ikeda, Y., 88M/3238, 4507 Ikenne, M., 88M/3076 Ikorsky, S. V., 88M/2429 Ilani, S., 88M/2138, 2649, 3548 Ilebekk, S., 88M/1599 Ilger, J. D., 88M/5608 Ilger, W. A., 88M/5608 Il'in, M. I., 88M/4317 Illing, V. C., 88M/1414 Horca, S., 88M/1078 Ilupin, I. P., 88M/0065, 2166 Imafuku, M., 88M/5089 Imai, N., 88M/1047 Imakuma, K., 88M/0812 Imam, B., 88M/4659 Imamura, M., 88M/5124, 5125 Imbert, T., 88M/0165 Imboden, D. M., 88M/6308 Imposa, S., 88M/4556 Ineson, P. R., 88M/4804, 4882 Ingdahl, S. E., 88M/1230 Ingel, R. P., 88M/6434 Ingri, J., 88M/5809 Inkson, R. H. E., 88M/0200 Inners, J. D., 88M/0420 Innocenti, F., 88M/3254, 6237 Inoue, A., 88M/0180, 3356, 5016 Inskip, M. J., 88M/3617 Ionov, D. A., 88M/1272 Ireland, T. R., 88M/0954

Irgolic, K. J., 88M/3292

Irifune, T., 88M/0449,

3644

3642.

Irouschek-Zumthor, A., 88M/ 2653 Irvine, J. A., 88M/0870 Irvine, T. N., 88M/1191 Irving, A. J., 88M/2736, 3973 Isachsen, C. E., 88M/3967 Isaksson, I., 88M/3568 Ishan-Sho, G. A., 88M/4263 Ishibashi, J.-I., 88M/2398 Ishihara, S., 88M/1658, 2191, 2244, 2282, 2318, 2879 Ishii, K., 88M/6369 Ishikawa, H., 88M/3952 Ishiwatari, R., 88M/5904 Ishizaka, K., 88M/2243 Isler, F., 88M/4487 Ismail, Y. Bin, 88M/0887 Isobe, K., 88M/3237 Isotani, S., 88M/6437 Isoyama, H., 88M/5524 Isshiki, K., 88M/4108 Itamar, A., 88M/1487 Ito, E., 88M/0249, 0468, 0697 Ito, K., 88M/0953 Ivaldi, G., 88M/5092 Ivancsics, J., 88M/3083 Ivanitskiy, V. P., 88M/5426 Ivanov, D. A., 88M/0730 Ivanov, T., 88M/6177 Ivanova, G., 88M/3892 Ivanova, G. F., 88M/4310, 5567 Ivanova-Panajotova, V., 88M/ 0615 Ivanovich, M., 88M/2458, 3939, 5765, 5811 Ivantchenko, I. Yu., 88M/6046 Iverfeldt, A., 88M/5805

Iwai, A., 88M/5406 Iwasaki, T., 88M/3608, 4987 Ixer, R. A., 88M/0627, 1051 Iyengar, S. S., 88M/0074 Iyer, G. V. A., 88M/4396 Iyer, S. S., 88M/0812 Izaquirre, M., 88M/3692 Izawa, E., 88M/3905

Jaacks, J. A., 88M/4180 Jacko, S., 88M/3938 Jackson, D. H., 88M/5755 Jackson, H. R., 88M/2670 Jackson, M. D., 88M/6218 Jackson, T., 88M/2260 Jackson, T. J., 88M/5786 Jackson, W. E., 88M/3461 Jacob, R. E., 88M/3896 Jacobi, P., 88M/2372 Jacobs, J. A., 88M/4963 Jacobs, R. S., 88M/0737 Jacobsen, S. B., 88M/2125, 4066, 5768, 5771, 5772, 5839 Jacobson, M. I., 88M/4828, 4834, 6488 Jacobsson, E., 88M/5408 Jacquot, T., 88M/1157, 4471. 4473 Jadnacak-Biscan, J., 88M/3628 Jaegy, R., 88M/0011

Jaffe, F. C., 88M/5813 Jaffe, E. B., 88M/6015 Jaffe, H. W., 88M/6015 Jager, B., 88M/1571 Jager, H., 88M/3705 Jago, B. C., 88M/4513 Jagodzinski, H., 88M/3472 Jagoutz, E., 88M/3972, 4892 Jahn, B.-M., 88M/1231, 4060, 4903. 4907 Jaillard, L., 88M/0396 Jain, A. K., 88M/2694 Jain, K. K., 88M/0424 Jain, S. K., 88M/5870 Jain, V. K., 88M/4385 Jaireth, S., 88M/0608, 2167 Jakes, P., 88M/2744 Jakobsson, S., 88M/1297 Jambon, A., 88M/0592, 0695 Jambor, J. L., 88M/1054 James, D., 88M/6232 James, K., 88M/4229 James, N. P., 88M/4667 James, P. M., 88M/6298 James, P. R., 88M/3110 James, T. C., 88M/0346 Jamet, R., 88M/3422 Jamieson, R. A., 88M/3114 Jamtveit, B., 88M/3036 Jan, M. Q., 88M/1278 Janak, M., 88M/6403 Jan, M. Q., 88M/4062 Janardhan, A. S., 88M/1492, 6000 Janczek, J., 88M/1743 Janecky, D. R., 88M/3811 Jang, B.-A., 88M/1290 Janjic, S., 88M/2625 Jankovic, A., 88M/1885 Jannasch, H. W., 88M/4111 Jansa, L. F., 88M/0967, 3963 Janse, A. J. A., 88M/4432 Jansen, J. B. H., 88M/0559, 3734, 3805, 4271, 0602, 5472, 5483 Jansen, J. C., 88M/0268 Jansen, J. H. F., 88M/1063 Jansen, S., 88M/1194 Janssens, M.-J., 88M/2528 Jaoul, O., 88M/5448, 6436 Japa, E., 88M/0159 Jaquier, D. R., 88M/1684 Jaramillo, H. A. E., 88M/5491 Jarmolowicz-Szulc, K., 188M/ 0019 Jaron, J. L., 88M/3227 Jarosch, D., 88M/0280, 1821. 3506, 5158 Jarosewich, E., 88M/4757 Jarvis, I., 88M/0778, 2293, 5601 Jarvis, J., 88M/4629 Jarvis, K. E., 88M/4945 Jasinski, A. W., 88M/3585, 3586 Jauhari, P., 88M/3879 Jaulmes, S., 88M/5153 Jaupart, C., 88M/0474, 1206, 2855, 4542

Javoy, M., 88M/0951, 0952, 2002, 2195, 2394, 4223. 5624, 5628, 5637 Jaworowski, K., 88M/2979 Jayaprakash, A. V., 88M/4389, 4390 Jayaram, K. M. V., 88M/3550 Jaynes, W. F., 88M/3358 Jean-Baptiste, P., 88M/2393 Jeandel, C., 88M/2381 Jeandel, G., 88M/4784 Jeanloz, R., 88M/3461, 4764, 5363, 6441 Jebrak, M., 88M/3928, 3993 Jecinovich, M. J., 88M/1447 Jedwab, J., 88M/4322 Jeffers, J. D., 88M/3413 Jefferson, C. W., 88M/2912, 5943, 6500 Jefferson, D. P., 88M/1943 Jefferson, T. H., 88M/1438 Jegouzo, P., 88M/5627 Jehanno, C., 88M/0955 Jenden, P. D., 88M/0864 Jeng, R.-C., 88M/5139 Jenkins, D. A., 88M/0198 Jenkins, D. M., 88M/0556 Jenkins, D. T., 88M/5874 Jenkins, R., 88M/3272, 3326 Jenkins, R. J. F., 88M/4905 Jenkins, W. J., 88M/5560 Jenner, G. A., 88M/0684 Jenner, K. A., 88M/1927 Jennings, D. S., 88M/0656 Jensen, A., 88M/0583 Jensen, D. J., 88M/4992 Jensen, L. R., 88M/2997 Jensen, L. S., 88M/1353, 6270 Jensen, P. D., 88M/5526 Jensen, T. F., 88M/5699 Jerde, E. A., 88M/2531, 5973 Jessell, M. W., 88M/4694 Jessome, D. R., 88M/4043 Jester, W. A., 88M/5881 Ji, S., 88M/4772, 6376, 6439 Jia, G., 88M/3597 Jiang, C., 88M/3950 Jiang, J., 88M/4118 Jiang, Y., 88M/5257 Jiang, Z. S., 88M/4144 Jickells, T. D., 88M/5845 Jilson, G. A., 88M/0656 Jin, Ch., 88M/3231 Jin, S., 88M/3100, 4741 Johan, A., 88M/2587 Johannes, W., 88M/4699 Johansson, L., 88M/4700 Johari, S., 88M/0877 Johns, R. B., 88M/2417 Johnsen, O., 88M/4799 Johnson, B. D., 88M/3264 Johnson, C. A., 88M/1852 Johnson, C. H. J., 88M/3443 Johnson, E. W., 88M/6111 Johnson, G. C., 88M/6441 Johnson, G. D., 88M/5701 Johnson Jr, G. G., 88M/0068 Johnson, H. P., 88M/3141 Johnson, J. L., 88M/0068, 0406

Johnson, K. R., 88M/1653 Johnson, K. S., 88M/0837, 5843 Johnson, M. G., 88M/0132 Johnson, M. R. W., 88M/4879 Johnson, N. E., 88M/1053, 5148 Johnson, P., 88M/0944 Johnson, R., 88M/4916 88M/2497, Johnson, R. G., 3306 Johnson, W., 88M/4585, R. 6301 Johnson, T., 88M/3739 Johnson, W. K., 88M/4037 Johnston, A. D., 88M/5369 Johnston, J. H., 88M/0147, 5967 Johnston, K. A., 88M/3260 Johnston, R. D., 88M/4749, 5224 Jolliff, B. L., 88M/2130 Jolly, W. T., 88M/2270, 3966 Jonasson, I. R., 88M/1869, Jonasson, R. G., 88M/5444 Jones, A. D., 88M/1567 Jones, A. G., 88M/4790 Jones, A. P., 88M/2025, 2578 Jones, B., 88M/1064, 3008. 4326 Jones, B. F., 88M/3817 Jones, D., 88M/1906 Jones, E., 88M/6205 Jones, E. J. W., 88M/2293 Jones, E. M., 88M/1874, 5190, 5924 Jones, G. C., 88M/1081, 2797, 3571 Jones, G. F. P., 88M/5286 Jones, J. B., 88M/1431 Jones, J. H., 88M/2529 Jones, L., 88M/4791 Jones, L. M., 88M/0392, 5574 Jones, M. J., 88M/0088 Jones, M. P., 88M/0089 Jones, N. W., 88M/0699 Jones, P. D., 88M/4535, Jones, R. A., 88M/2780 Jones, R. D., 88M/3304 Jong, A. F. M. de, 88M/2969 Jong, B. J. W. S. de, 88M/3478 Jopony, M., 88M/0135 Jordan, H., 88M/5856 Jordan, P., 88M/6466 Jorgensen, B. B., 88M/0763 Jorgensen, K. A., 88M/2814 Jorgensen, N. O., 88M/2296 Jorgensen, U. G., 88M/5965 Joron, J.-L., 88M/1223, 2792, 5621, 5640, 5704 Joseph, C., 88M/5867 Joshi, A. K., 88M/4733 Joshi, S. N., 88M/3284 Joshi, S. R., 88M/4942 Josserand, P., 88M/6168 Jouzel, J., 88M/0762 Jovanovic, S., 88M/4231 Jowett, E. C., 88M/0343, 3539 Jowett, R. J., 88M/3539 Jubeli, Y. M., 88M/0922

Juillet-Leclerc, A., 88M/2340 Julian, M. M., 88M/0052 Jull, A. J. T., 88M/3882, 5958 Jullkotter, J., 88M/5916 Jumas, J.-C., 88M/1080, 5443 Jung, D., 88M/4613 Juracic, M., 88M/3628 Juranek, J., 88M/2365 Juras, S. J., 88M/4944 Jusserand, C., 88M/5849 Juster, T. C., 88M/0183, 4683 Justo, A., 88M/3368 Juteau, M., 88M/0013, 1223 Juteau, T., 88M/2004 Jutras, M., 88M/4512 Juvigne, E., 88M/4549, 4602 Juyal, N., 88M/4033

Kaback, D. S., 88M/3912

Kadik, A., 88M/4414 Kadik, A. A., 88M/2200, 5479 Kadiyala, R. R., 88M/5081 Kadko, D., 88M/0779, 4109, 5531 Kadoshnikov, V. M., 88M/5477 Kadurin, V. A., 88M/4325 Kaelin, J.-L., 88M/2833 Kagel, C. T., 88M/3280 Kagi, R. I., 88M/4147, 5915 Kahan, S., 88M/1453 Kahkonen, Y., 88M/2202, 3048 Kahn, J. R., 88M/3631 Kaiping, A., 88M/3737 Kaiser, C. J., 88M/0664 Kakar, R. K., 88M/4735 Kake, T., 88M/4979 Kakuno, H., 88M/5473 Kakuto, Y., 88M/1763, 4975 Kalala, T., 88M/3545 Kalamarides, R. I., 88M/2121 Kalceva, Ju. K., 88M/1510 Kaliciakova, E., 88M/1056 Kalinichenko, A. M., 88M/3452, 5426 Kalinichenko, N. V., 88M/2200 Kalinicheva, T. V., 88M/5370 Kalinin, A. A., 88M/0548 Kalmykova, N. A., 88M/6061 Kalogeropoulos, S. I., 88M/2222 Kalsbeek, F., 88M/4053, 4866 Kam, M., 88M/3827 Kamadze, R. G., 88M/1490 Kamarad, J., 88M/3724 Kambou, R., 88M/1311 Kamenicky, L., 88M/3092 Kamenskiy, I. L., 88M/5711 Kamentsev, I. Ye., 88M/3738 Kamineni, D. C., 88M/1972, 1974, 1975, 3116, 3821, 3844 Kaminuma, H., 88M/3471 Kamiya, K., 88M/5380 Kamo, M., 88M/0439 Kamo, S. L., 88M/4912 Kamp, P. C. Van de, 88M/1444 Kampf, A. R., 88M/1040 Kampf, H., 88M/1405 Kampunzu, A. B., 88M/4494, 4572

Kanai, H., 88M/3845 Kanakin, S. V., 88M/5371 Kanamaru, F., 88M/5165 Kanaris-Sotiriou, R., 88M/2939 Kanazirski, M., 88M/0490 Kanda, H., 88M/3710 Kane, A., 88M/4095 Kane, J. S., 88M/2496, 2497 Kane, R. E., 88M/2091, 5488 5514 Kaneda, H., 88M/1047 Kaneoka, I., 88M/2258 Kaneshima, H., 88M/0497 Kango, R. A., 88M/5718 Kanno, T., 88M/5330 Kanwar, R., 88M/3824 Kanzaki, M., 88M/3726 Kaplan, I. R., 88M/0863, 0864 2439, 2444, 2445, 4163, 5526 Kapoor, M. I., 88M/5461 Kapralik, I., 88M/3724, 3756 Kapustin, Yu. L., 88M/3866 4331, 4684, 5641, 5685, 6368 Karabtsov, A. A., 88M/5480 Karaivonova, B., 88M/0633 Karamanderesi, I. H., 88M/1455 Karamanos, H., 88M/2465 Karanth, R. V., 88M/5502 Karathanasis, A. D., 88M/1718 1777, 2644, 3376 Kargal'tsev, S. V., 88M/3508 Karger, M., 88M/3540, 3587 Karisiddaiah, S. M., 88M/4729 Karlsson, F., 88M/1967 Karlsson, S., 88M/5314 Karowe, A. L., 88M/1438 Karpov, G. A., 88M/5186 Karpov, I. K., 88M/3419 Kartashova, L. F., 88M/2162 Karus, E. W., 88M/2429 Karwacki, A., 88M/1942, 3077 Kasatov, A. S., 88M/4297, 558!

Kan, X. B., 88M/1790

Kassoli-Fournaraki, A., **88M** 1000, 2570 Kasting, J. F., 88M/0599 Katayama, K., 88M/1747 Katayeva, Z. T., 88M/0620 Kato, A., 88M/4261, 6065 Kato, M., 88M/0425, 1628 Kato, S., 88M/3905 Kato, T., 88M/3644 Kato, Y., 88M/3905 Katsui, Y., 88M/1296 Katsura, S., 88M/5146 Katz, M. B., 88M/0399 Kaufmann, R., 88M/3823 Kaup, B. S., 88M/3429 Kaur, S., 88M/2432 Kauwenbergh, S. J. Van, 88M 6079 Kavalieris, I., 88M/5255 Kavrichev, K. S., 88M/5979 Kawabata, H., 88M/0529 Kawachi, Y., 88M/6255 Kawada, I., 88M/5151 Kawahata, H., 88M/3786, 4272 Kawamura, K., 88M/4163

Kawasaki, T., 88M/2809 Kawashita, K., 88M/5681 Kay, E. A., 88M/5190 Kay, R., 88M/1681 Kay, R. L. F., 88M/3828 Kay, R. W., 88M/1112 Kay, S. M., 88M/1112, 2754 Kayama, M., 88M/4038 Kaye, J. A., 88M/4194 Kayne, A., 88M/4096 Kazachenko, V. T., 88M/4265 Kazakov, G. A., 88M/5116 Kazansky, V. I., 88M/3088, 3091 Kean, B. F., 88M/1643 Keating, B. H., 88M/5228 Keays, R. R., 88M/1847 Keck, B. D., 88M/4213 Kecsk s, A., 88M/2382 Keeler, W., 88M/3130 Keely, B. J., 88M/2432 Keen, C. E., 88M/2699, 3178 Keerthisinghe, G., 88M/1934 Kehlenbeck, M. M., 88M/6139 Keil, K., 88M/4240 Keith, J. D., 88M/6276 Keith, T. E. C., 88M/0745, 4282 Kelemen, P. B., 88M/0475 Kelepertsis, A. E., 88M/2465 Keller, G. H., 88M/6338 Keller, W. D., 88M/1717 Kelley, D. S., 88M/1379 Kelley, S., 88M/3204 Kelley, S. A., 88M/4774 Kelley, W. C., 88M/0664 Kellomaki, A., 88M/3387 Kelly, E., 88M/4049 Kelly, P. M., 88M/0401, 4535 Kelly, W. C., 88M/0834 Kelts, K., 88M/5862 Kemp, A. E. S., 88M/2687 Kemp, M. K., 88M/4155 Kempton, P. D., 88M/3011, 4437 Kendall, C., 88M/4929 Kendall, C. G. St. 88M/6451 Kennan, P. S., 88M/3206, 3207 Kennedy, B. M., 88M/4226 Kennedy, H. A., 88M/2291, 2292 Kennedy, L. P., 88M/3128 Kennedy, M. J., 88M/3054 Kennedy, M. M., 88M/1979 Kennedy, W. J., 88M/1411 Kennicutt II, M. C., 88M/0861, Kenyon, P. M., 88M/2933 Kepezhinskas, P. K., 88M/0458, 4584 Kepezhinskas, V. V., 88M/4584 Keppie, J. D., 88M/3113 Keren, R., 88M/0155, 5011 Kerkhof, A. M. van den, 88M/ 3886

Kern, H., 88M/6462

Kerr, A., 88M/1257

Kerr, M. T., 88M/2582

Kerr, R. C., 88M/1204, 5368, Kerrich, R., 88M/0312, 0657, 1975, 5528, 6372 Kerrich, R. W., 88M/6010 Kerrick, D. M., 88M/0976, 5393 Kerridge, J. F., 88M/2525 Kersten, M., 88M/4022 Kerzin, A. L., 88M/5646 Keskinen, M., 88M/2064 Kesler, S. E., 88M/0392, 0665, 2491, 2504 Kesse, G. O., 88M/0334 Kesson, S. E., 88M/6057 Kester, D. R., 88M/5846 Keto, L. S., 88M/2125 Ketris, M. P., 88M/2308, 3941 Ketshoveli, D. N., 88M/1490 Kettles, I. M., 88M/2328 Key, T. C., 88M/4120 Khain, V. Ye., 88M/4609 Khalifa, M. I., 88M/4653 Khamitova, R. G., 88M/0847 Khan, W., 88M/1864, 2947 Khan, Z., 88M/1921 Khan, Z. A., 88M/5327 Khanadali, S. D., 88M/1773 Khanna, S., 88M/4567 Khapaev, V. V., 88M/1205 Khapayev, V. V., 88M/6192 Kharaka, Y. K., 88M/5788 Kharitonov, V. M., 88M/0769 Khar'kiv, A. D., 88M/1274 Khemd, R., 88M/0369 Khiltova, V. J., 88M/4901 Khitarov, N. I., 88M/5457 Khodakovskiy, I. L., 88M/2017, 4227. 5979 Khodyrev, O. Yu., 88M/3645 Khomenko, V. M., 88M/2562 Khomyakov, A. P., 88M/1067, 1090 Khorasani, G. K., 88M/2409 Khoury, H. N., 88M/1749, 2985 Khova, S. L., 88M/4102 Kidd, W. S. F., 88M/3232 Kiefert, L., 88M/0572, 2094, 3776 Kieffer, G., 88M/3211 88M/0979, Kienast, J. R., 0997, 5637, 6389 Kiene, R. P., 88M/5886 Kiesl, W., 88M/3065 Kihara, K., 88M/5124, 5125 Kihn, Y., 88M/5441 Kijak, P. J., 88M/3619 Kikuchi, M., 88M/5412 Kikuchi, Y., 88M/3786 Kikutani, T., 88M/4321 Kilburn, C. R. J., 88M/1304 Kilby, W. E., 88M/6450 Kilias, S., 88M/0304 Killick, A. M., 88M/6411 Kim, J., 88M/5836 Kim, K. H., 88M/0652 Kim, S. E., 88M/1327 Kim, S. J., 88M/0577 Kim, Y. K., 88M/4582

Kimata, M., 88M/0243, 3475 Kimball, B. A., 88M/5842 Kimberley, M. M., 88M/2457 Kimbrough, D. L., 88M/0042, 3241, 4425 Kimoto, T., 88M/4934 Kimpe, C. de, 88M/0197 Kimpe, C. R. De, 88M/0182 Kimura, M., 88M/3905 Kimyongur, N., 88M/1413 Kincaid, P. J., 88M/3323 King, B.-S. W., 88M/3310 King, H. D., 88M/2489 King, J. A., 88M/0188 King, J. D., 88M/2448, 4158 King, J. K., 88M/1930, 1935, 1941, 1947, 1948, 1950, 3848 King, R. H., 88M/1745 King, R. W., 88M/5528, 6010 King, V. T., 88M/4827 Kinghorn, R. R. F., 88M/2423 Kinnaird, J. A., 88M/2798 Kinniburgh, D. G., 88M/2374, 5858 Kinnunen, K., 88M/2547 Kinraide, T. B., 88M/1711 Kinsel, E. P., 88M/4930 Kinsley-Momberger, J., 88M/1978 Kirby, G. A., 88M/6110 Kirby, S. H., 88M/1516, 6098 Kirdyashkin, A. G., 88M/2144 Kireyev, B. S., 88M/2237 Kirfel, A., 88M/0240, 1841 Kirichenko, A. A., 88M/1019 Kirichenko, V. T., 88M/1019 Kirkham, R. V., 88M/2332, 2912 Kirkland, J. A., 88M/4993 Kirkley, M. B., 88M/4418 Kirkman, J. H., 88M/0211 Kirkpatrick, R. J., 88M/0273, 1784, 1805, 3366, 3453 Kirov, G. K., 88M/2084 Kirsch, I., 88M/2753 Kirschbaum, C., 88M/5959 Kirschenbaum, H., 88M/2497, 2498 Kirschvink, J. L., 88M/1541 Kirwan Jr, A. K., 88M/0438 Kisch, H., 88M/2944 Kisch, H. J., 88M/4681 Kiseleva, I. A., 88M/0457, 2063 Kishazi, P., 88M/3083 Kishida, A., 88M/0657 Kissin, S. A., 88M/1824 Kissin, Y. V., 88M/2421 Kisvarsanyi, E. B., 88M/5241 Kita, B., 88M/0543 Kitagawa, R., 88M/0180 Kitajima, S., 88M/3750 Kitamura, M., 88M/0969, 2551, 4230 Kitamura, T., 88M/5012 Kitano, Y., 88M/0497, 2645 Kitazato, H., 88M/1326 Kitcher, R. E. Ruiz, 88M/1365 Kittrick, J. A., 88M/1714 Kjarsgaard, B. A., 88M/2027

Klaper, E. M., 88M/3035, 3062 Klar, A., 88M/1251 Klarsfeld, S., 88M/4784 Klaver, G. T., 88M/2306 Klein, C., 88M/0446, 1448. 1587, 4965 Klein, E., 88M/5011, 6170 Klein, J., 88M/0613, 3711, 5935, 5972 Klem, R. B., 88M/0919 Klemd, R., 88M/1863, 4910 Kleppa, O. J., 88M/0547, 3763 Klerk, W. J. de, 88M/2846 Kliche, G., 88M/3502 Klima, K., 88M/0016 Klinkhammer, G., 88M/0820 Klinowski, J., 88M/1814 Kluger, F., 88M/5567 Klump, J. Val, 88M/0412 Klusman, R. W., 88M/4180 Klute, M. A., 88M/1446 Klyakhin, V. A., 88M/3508 Knapp, S. T., 88M/0514 Knauss, K. G., 88M/3742 Kneeshaw, M., 88M/5223 Kneller, B. C., 88M/4880 Kniewald, G., 88M/3283, 3627, 6077 Knight, I., 88M/4667 Knight, P. G., 88M/0762 Knights, J. G., 88M/5212, 5282 Knipe, R. J., 88M/1465, 6102 Knipper, A. L., 88M/4660 Knittel, U., 88M/1396, 1397, 3958, 5662, 5663 Knittle, E., 88M/3461 Knobloch, D., 88M/0542 Knoper, M. W., 88M/6429 Knorring, O. von, 88M/2613 Knowles, C. R., 88M/3263 Knutson, J., 88M/0355 Ko, J., 88M/5413 Kobayashi, K., 88M/1172 Kobayashi, Y., 88M/0683 Koch, J., 88M/6329 Kochenov, A. V., 88M/4029 Kochetkov, A. Ya., 88M/0308 Kochhar, N., 88M/4498 Kock-van Dalen, A. C., 88M/ 2422, 2450 Kocman, V., 88M/3316 Kodama, H., 88M/0182, 1738, 2442, 4985, 5110 Kodera, M., 88M/5822, 5834 Kodina, L. A., 88M/4140, 4166, Koeberl, C., 88M/5996, 5998 Koesterer, M. E., 88M/4759 Koestler, A. G., 88M/6380 Kogan, R. I., 88M/0726 Kogarko, L. N., 88M/0571. 1205, 2807, 3884, 5642, 6192 Kohlstedt, D. L., 88M/5409, 6448 Kohn, B. P., 88M/0020 Kohn, S. C., 88M/1785 Kohyama, N., 88M/0180 Koide, M., 88M/0084, 0590 Koishi, Y., 88M/2550

Koivula, J. I., 88M/0586, 2099, 2101, 2110, 5488, 5508, 5518, 5520 Kojima, H., 88M/0241 Kojima, S., 88M/3566 Kolata, D. R., 88M/0186 Kolceva, K., 88M/1479 Kolebski, J., 88M/4651 Kolenko, Yu. A., 88M/2849 Kolesov, G. M., 88M/0930, 5927, 5978 Koljonen, T., 88M/2547 Kolla, V., 88M/2311 Koller, F., 88M/1913, 2937, 2938, 3065 Kolmer, H., 88M/3318 Kolobov, V. Yu., 88M/3026 Kolodny, Y., 88M/3616, 3987 Koloskov, A. V., 88M/0606 Kol'tsov, A. B., 88M/2147 Koltsov, A. B., 88M/0452 Koltypin, A., 88M/6124 Komadel, P., 88M/3360, 5001 Komarneni, K., 88M/5115 Komarneni, S., 88M/2069, 4995, 5329, 5469 Komissarov, V. V., 88M/4099, 2367 Komleva, I. B., 88M/4844 Komskiy, N. M., 88M/2287 Kondatyev, K. Ya., 88M/4195 Kondoh, S., 88M/0969 Kong, L., 88M/5257 Konik, Z., 88M/3391 Konings, R. J. M., 88M/5483 Koningsveld, H. van, 88M/0268 Konnert, J. A., 88M/0269 Konnikov, E. G., 88M/5371 Kono, M., 88M/1522, 3492 Kononova, V. A., 88M/4899, 5646 Konovalenko, S. I., 88M/5552, 6006 Kontinen, A., 88M/2934 Kooistra, M. J., 88M/1063 Koons, P. O., 88M/4780 Koopman, H. T., 88M/1897 Kooten, G. K. van, 88M/0893 Kopaevich, L. F., 88M/4660 Kopeykin, V. A., 88M/0757 Koplus, A. V., 88M/5577 Kopneva, L. A., 88M/4310 Koppel, V., 88M/2215 Koppenaal, D. W., 88M/3970 Koppi, A. J., 88M/0124, 1771, 3430 Koptev-Dvornikov, 88M/2237 Korago, A. A., 88M/6043 Korago, A. H., 88M/1023 Koralewski, M., 88M/1831 Korchagin, A. M., 88M/1270 Kordus, V. I., 88M/5896 Korikovskii, S. P., 88M/1453, 1454 Korikovskiy, S. P., 88M/3092 Korikovsky, S. P., 88M/6403 Korina, E. A., 88M/2162 Kormaneni, S., 88M/3744

Kornacki, A. S., 88M/4215 Korneliussen, A., 88M/0970 Korobeynikov, A. F., 88M/0689 Korobitsin, M. F., 88M/1090 Korobov, A. D., 88M/1758 Korotev, R. L., 88M/5533 Korsakov, O. D., 88M/4149 Korsch, M. J., 88M/5598 Korsch, R. J., 88M/2697, 5725, 6345 Korstgard, J. A., 88M/2810 Kortemeier, W. T., 88M/0978 Korth, A., 88M/0960 Korun, M., 88M/5312 Korytov, F. Ya., 88M/1858 Korzhanovskaya, V. S., 88M/ 2233 Korzhinskiy, M. A., 88M/5374, 5404 Kosakevitch, A., 88M/3934 Kosbohm, J., 88M/4652 Kosciowko, H., 88M/0194, 3400 Koseluk, R. A., 88M/4414 Koshemchuk, S. K., 88M/2056 Koshimizu, S., 88M/1628 Kosina, M., 88M/4627 Koski, R. A., 88M/5606 Koskinen, J., 88M/3321 Kosmowska-Ceranowicz, 88M/2978 Kosov, A. Ye., 88M/5777 Kossovskaya, A. G., 88M/4628 Kosters, E. C., 88M/4160 Koster van Groos, A. F., 88M/ 0560 Kostov, I., 88M/0622, 1480 Kostov, R. I., 88M/4766 Kosyakova, N. A., 88M/2066 Koszela, J., 88M/0157, 5005 Kosztolanyi, C., 88M/5605 Kosztolanyi, Ch., 88M/5642 Kotarba, M., 88M/5890 Kote, D., 88M/2941 Kotel'nikov, A. R., 88M/2086, 2087, 3095, 3740, 5480 Kotelnikov, P. E., 88M/4315 Kotelnikova, E. N., 88M/5020 Kotel'nikova, Z. A., 88M/2086, 3095 Kotlyar, L. S., 88M/2442 Koto, K., 88M/5165 Kotorgin, N. F., 88M/3942 Kotoub, S., 88M/5858 Kotov, A. B., 88M/5644 Kotov, N. V., 88M/0452 Kotova, A. V., 88M/4141 Kotul'ak, P., 88M/1056 Koul, S. L., 88M/3240 Kovacs, S., 88M/3082 Kovalenker, V. A., 88M/3861 Kovalenko, N. I., 88M/3694 Kovalenko, V. I., 88M/0307, 0691, 1272, 1273, 2854, 4440 Kowallis, B. J., 88M/1290 Kowalski, W. M., 88M/1754, 1755, 2987, 2988, 3406, 4496 Koyaguchi, T., 88M/1323, 1324, Kozak, R. C., 88M/4207

Kozeluha, V., 88M/0521 Kozerenko, S. V., 88M/5426 Koziol, A. M., 88M/5481 Kozlov, A. V., 88M/1023 Kozlov, V. K., 88M/2017 Kozlova, O. G., 88M/3704 Kozlowska-Koch, M., 88M/2899 Kozlowski, A., 88M/3024, 5491 Kozuki, Y., 88M/0425 Kraftmakher, Ya. A., 88M/0517 Kral, J., 88M/1618, 1619, 5576 Kralik, M., 88M/0016, 5882 Kramer, J. R., 88M/2034, 2289, 4961 Kramers, J. D., 88M/0330, 3901 Kramm, U., 88M/1397, 3864, 4899 Krantz, D. E., 88M/5833 Kranz, G., 88M/1724, 3371 Krapez, B., 88M/2698 Krasnikov, N. N., 88M/0639 Krasnov, S. G., 88M/0666 Krasteva, M., 88M/0294, 1480 Krasteva, M. K., 88M/1916 Kratz, T., 88M/5152 Krause, M., 88M/2459 Kravchenko, S. M., 88M/2849 Kravchuk, I. F., 88M/5389, 5480 Kravtsov, E. D., 88M/0293 Kravtsova, R. P., 88M/2233 Kraynov, S. R., 88M/5686 Kregar, I., 88M/3629 Kreidler, E. R., 88M/0544 Kreimeyer, R., 88M/0152 Kreitler, C. W., 88M/3624, 5782 Krell, U., 88M/5319 Kremenetskiy, A. A., 88M/3026 Kremenetsky, A. A., 88M/3090 Kremling, K., 88M/5808 Kress, V. C., 88M/3690 Kresten, P., 88M/2739 Krestin, E. M., 88M/3537 Kretser, Yu. L., 88M/4249 Kreulen, R., 88M/3804, 3805, 5750 Kreuzer, H., 88M/3217 Krigman, L. D., 88M/0571 Krigman, L. V., 88M/3697, Krill, A. G., 88M/1130 Krinsley, D. H., 88M/0187 Krishna, P., 88M/5070 Krishna Murti, G. S. R., 88M/ 1776 Krishnamurti, G. S. R., 88M/ 3389 Krishnan, K. F. M., 88M/5964 Krishnaswami, S., 88M/5559 Krist, E., 88M/6403 Kritidis, P., 88M/5325 Krivitskiy, V. A., 88M/2309 Krivovichev, V. G., 88M/0604 Krivovitchev, V. G., 88M/0728, 3678 Krogh, E. J., 88M/5455 Krogh, T. E., 88M/3195, 4912

Krogstad, E. J., 88M/0724 Krohn, M. D., 88M/6084 Kroitoru, L., 88M/5871 Krol, L. G., 88M/4426 Kroll, H., 88M/0259, 3737 Kromis, M. S., 88M/1693 Kronberg, B., 88M/4028 Kronberg, B. I., 88M/2286 Kronenberg, A. K., 88M/1516 Kroner, A., 88M/0025, 322 4030, 4889, 4902 Kronfeld, J., 88M/2138, 3548 Kronick, A. T., 88M/5833 Kroonenberg, S. B., 88M/3437 Kropacek, V., 88M/1527, 1536 Kropp, W. P., 88M/0668 Kropschot, S. J., 88M/0295 Krouse, H. R., 88M/2187, 361 3996, 3997, 3999, 411 5543, 5603 Krouse, H. Roy, 88M/1976 Krs, M., 88M/1536 Krstic, D., 88M/3247, 5537 Kruer, S. A., 88M/0668 Kruger, F. J., 88M/2231, 4495 Kruger, J., 88M/2139 Kruger, P., 88M/2364 Kruglyakov, V. V., 88M/4149 Kruhl, J. H., 88M/1476, 166 4718 Krumhansl, J. L., 88M/5544 Krupp, G., 88M/3567 Krupp, R., 88M/3567 Kruse, T. H., 88M/4210 Krylova, M. D., 88M/0582 Krylova, T. L., 88M/0732 Kryukov, V. L., 88M/5421 Ku, T.-L., 88M/0048, 3982, 5338, 5732 Kubik, P. W., 88M/3907 Kubovics, I., 88M/5372 Kucha, H., 88M/1905 Kucharczyk, W., 88M/5164 Kudelaskova, J., 88M/4477 Kudo, A. M., 88M/1367 Kudoh, Y., 88M/3447, 348 3498, 5122 Kudravtseva, G. P., 88M/4740 Kudryashova, V. I., 88M/4348 Kudryavtseva, G. P., 88M/313 3136 Kuishou, D., 88M/4304 Kukovskij, J. G., 88M/0567 Kulesza-Wiewiora, 88M/3405 Kulikov, T. B., 88M/2389 Kulish, E. A., 88M/3412 Kullerud, G., 88M/0670, 2040 Kullerud, L., 88M/1599 Kumao, A., 88M/1813 Kumar, A., 88M/3288 Kumar, B., 88M/0773 Kumar, G. R. R., 88M/1493 Kumar, G. R. Ravindra, 88N 1492, 1548 Kumar, M. D., 88M/2359 Kumar, M. Dileep, 88M/4103 Kumar, P. S., 88M/5022 Kumar, U. V., 88M/2995

Kumar, V., 88M/1426 Kumaran, K., 88M/4388 Kumarapeli, P. S., 88M/2269 Kumazawa, M., 88M/0425 Kumeev, S. S., 88M/0606 Kump, L. R., 88M/0438, 0600 Kunzel, H. E., 88M/4815 H., Kunzendorf. 88M/0655, 0881, 2326 Kuo, C., 88M/6451 Kuo, K. H., 88M/1823 Kuo, L.-C., 88M/0453 Kupriyanova, I. N., 88M/0457 Kurakolova, Ye. A., 88M/4122 Kurasawa, H., 88M/3952 Kurat, G., 88M/2530 Kurbskiy, G. P., 88M/0847 Kurcz, I., 88M/5882 Kurepin, V. A., 88M/3727 Kurilo, M. V., 88M/0638 Kurki-Suonio, K., 88M/1819 Kurki-Suonio, R., 88M/1819 Kurkina, E. B., 88M/5477 Kurmakaeva, F. A., 88M/1038 Kuroda, R., 88M/0519 Kurova, T. A., 88M/1090 Kurskiy, A. N., 88M/2290, 5600 Kurz, M. D., 88M/3959, 5560 Kurzweil, H., 88M/2586 Kusaba, K., 88M/5412 Kusakabe, M., 88M/2142, 3786, 5338 Kusatz, B., 88M/3737 Kushiro, I., 88M/1214, 3717, 4212, 5383 Kushov, O. L., 88M/5379, 5450, 3719 Kusunoki, K., 88M/0937 Kutina, J., 88M/0365 Kutschera, W., 88M/0047 Kutty, R. N., 88M/4396 Kutyev, F. S., 88M/5187 Kuwamoto, T., 88M/4108 Kuz'min, M. I., 88M/0307 Kuzmin, S. A., 88M/0452 Kuz'min, V. K., 88M/1491 Kuzmina, O. V., 88M/4320 Kuznetsov, V. V., 88M/2164 Kuznetsova, T. P., 88M/5426 Kvalheim, O. M., 88M/0848 Kvick, A., 88M/3485, 3488 Kvick, A., 88M/5093, 5118 Kwak, T. A. P., 88M/0808, 1710 Kwakwa, K., 88M/0488 Kwokal, Z., 88M/3630, 3283 Kwon, S. T., 88M/4431 Kyle, J. H., 88M/2320 Kyle, J. R., 88M/5786 Kyle, P. R., 88M/2753, 3471 Kyotani, T., 88M/3395 Kyser, T. K., 88M/0784, 0804,

Laajoki, K., 88M/3041 Labeyrie, L., 88M/2360, 2393, 3415 Labotka, T. C., 88M/4757 LaBrecque, J. J., 88M/2510 la Casa Martinez, C. de, 88M/ 6485 Lacerda, C. P., 88M/2455 Lachaine, A., 88M/3869 Lacomme, A., 88M/3579 Lacroix, D., 88M/3887 Ladygin, V. M., 88M/4793 Laeter, J. R. De, 88M/1634, 2532, 5597 Lafitte, M., 88M/2140 Lafon, J.-M., 88M/4885 Lagache, M., 88M/2016, 2019, 5376 Lagaly, G., 88M/3368 Lager, G. A., 88M/0244, 1822 Lagerblad, Bj., 88M/3526 Lago, M., 88M/1239 Lago-San, M., 88M/4284 Lagustina, Ye. P., 88M/4220 Laguta, O. N., 88M/6046 Lagutina, Ye. P., 88M/5474 Lahanier, C., 88M/6486 Lahermo, P. W., 88M/3825 Lahti, S. I., 88M/2564, 2590 Lahusen, L. G., 88M/5250 Lair, Ph., 88M/4016 Laird, D. A., 88M/5002 Lake, R. D, 88M/4631, 4632, 6114 Lakshmana, B. K., 88M/4388 Lal, D., 88M/0613, 3837, 4081 Lal, R., 88M/1589 Lal, R. K., 88M/3097 Lalithambika, M., 88M/1766 Lallier, S., 88M/3555 Lalou, C., 88M/3984 LaManna, J. M., 88M/0184 Lamb, M. F., 88M/2397 Lamb, S. H., 88M/4406 Lamb, W. M., 88M/1504 Lambert, D. D., 88M/2277, 5672 Lambert, G., 88M/3917 Lambert, I. B., 88M/0320, 0355 Lambert, J. L. M., 88M/6155 Lambert, M. B., 88M/6287 Lamens, J., 88M/4638 Lameyre, J., 88M/0704 Lammerer, B., 88M/6225 Lamothe, P. J., 88M/5788 Lampen, P. H., 88M/3825 Land, L. S., 88M/1443, 4116, 4669 Landa, E. R., 88M/1674 Landais, P., 88M/2449, 4133 Landers, D. H., 88M/4112 Landing, W. M., 88M/5799 Landis, G. P., 88M/5548, 5549, 5607 Landsberger, S., 88M/0924 Lane, D. W., 88M/3273 Lanev, V. S., 88M/3088, 3089 Lang, D., 88M/0379 Lang, Z., 88M/2316 Langdon, G. S., 88M/4705

Lange, F. de, 88M/2450

Lange, G. J. De, 88M/0825, 5825 Lange, H., 88M/2464, 4006 Lange, J., 88M/3561 Lange, R. A., 88M/3687 Langenheim, V. A. M., 88M/ 1335 Langlais, C., 88M/4784 Langmuir, C. H., 88M/0696, 3915 Lanham, J. L., 88M/1962 Lanphere, M. A., 88M/0736 Lanzafame, G., 88M/2896 Lapautina, I. P., 88M/3861 la Pena, J. A. de, 88M/2972 Lapides, I. L., 88M/4258 Lapidus, I. V., 88M/3090 Lapierre, H., 88M/3975, 6305 Lapin, A. V., 88M/2344, 2850 Lapina, I. V., 88M/5452 Lapointe, P., 88M/3142 Lapot, W., 88M/2980 Lapouyade, R., 88M/5883 Lapre, J. F., 88M/6315 Laputina, I. P., 88M/2166, 2557 Lardeaux, J.-M., 88M/0702, 0801, 1474, 1477, 4713, 6400 Larese, R. E., 88M/0512 Large, R. R., 88M/0356, 5280 Larimer, J. W., 88M/2522 Larouziere, F. D. de, 88M/1162 Larque, P., 88M/0651 Larrabee, G. B., 88M/4920 Larsen, A. O., 88M/4287 Larsen, J. G., 88M/6231 Larsen, L. M., 88M/1186, 2804 Larsen, O., 88M/0001 Larsen, P .- H., 88M/6104 Larson, R. L., 88M/4853 Lasaga, A., 88M/3706 Lasaga, A. C., 88M/0569, 0786, 5393 Laskowski, N., 88M/4030 Laskowski, S., 88M/5326 Laslett, G. M., 88M/0129, 4330 Lasmanis, R., 88M/4833 Last, W. M., 88M/6341 Latham, A. G., 88M/1970, 1971, 2271, 3139 Latiere, H.-J., 88M/3266 Latonin, S. S., 88M/6061 Latrous, K., 88M/2065 Lattanzi, P., 88M/1861, 1912 Lattard, D., 88M/5411 Latter, J. H., 88M/4586, 6263 Lau, J. L., 88M/5596 Laul, J. C., 88M/2130, 4420 Laurent, P., 88M/2717 Laurent, R., 88M/1382, 4615 Lauria, D. C., 88M/4955 Laver, J., 88M/6071 Lavergne, D., 88M/2375 Laverne, C., 88M/2560 Lavery, N. G., 88M/2505 Laviano, R., 88M/0169 Lavigne Jr, M. J., 88M/0322 Laville-Timsit, L., 88M/4019 Lavina, P., 88M/3209 Lavkulich, L. M., 88M/4997

Lavrenko, N. S., 88M/3941 Lavrent'ev, Yu. G., 88M/1092 Lavrukhina, A. K., 88M/4227, Law, K., 88M/5332 Law, L. M., 88M/5788 Law, R. D., 88M/1102, 1465, 4702 Lawless, J. V., 88M/1459, 5184 Lawrence, D. J. D., 88M/4634 Lawrence, J. R., 88M/2295 Lawrence, R. W., 88M/3110 Lawson, C. A., 88M/1540 Laxen, D. P. H., 88M/3618 Laybourn-Parry, J., 88M/6157 Layer, P. W., 88M/3187 Lazar, B., 88M/3871 Lazarenkov, V. G., 88M/1254 Lazareva, Ye. V., 88M/5848 Laz'ko, E. M., 88M/4691 Lea, J. F., 88M/5596 Leach, D. L., 88M/2492, 5607 Leake, B. E., 88M/0992, 1444 Leake, R. C., 88M/0596 LeAnderson, P. J., 88M/3912, 4754 Lear, P. R., 88M/2075 Leardi, L., 88M/1381 Leat, P. T., 88M/2204, 2823 Leavens, P. B., 88M/0245, 0972 Leavitt, D. L., 88M/4826 Le Bas, M. J., 88M/2786, 4492, Lebedenko, F., 88M/3355 Lebedev, V. I., 88M/0231 Lebedev, V. L., 88M/4312 Lebedev, Ye. B., 88M/3686 Lebedeva, L. I., 88M/4661 Lebedeva, M. I., 88M/5348 Lebel, J., 88M/5689 Lebkechner-Neugebauer, J., 88M/5142 Leblanc, M., 88M/1450 Lebofsky, L. A., 88M/2514 Lebras, M., 88M/3976 le Chapelain, J. R., 88M/1876 Lechler, P. J., 88M/2499, 4928 Leckie, J. O., 88M/3299 Leclair, A. D., 88M/0990 Leclerc, A. J., 88M/2360 Le Cloarec, M.-F., 88M/3917 Lecolle, M., 88M/1860, 1880 Lecomte, P., 88M/5926 Lecuyer, C., 88M/6305 Lee, C. A., 88M/0720 Lee, C. W., 88M/5756 Lee, D. C., 88M/2752 Lee, D. E., 88M/6027, 6028 Lee, D. J., 88M/0577 Lee, D. S., 88M/0084 Lee, G. W., 88M/0127, 0829 Lee, Hian Kee, 88M/3623 Lee, J. H., 88M/0453 Lee, M., 88M/2581 Lee, M. K., 88M/1602 Lee, R., 88M/5043, 5045, 5047, 5051, 5052, 5054, 5055 Lee, W. E., 88M/0553 Lee, Y. I., 88M/0780, 6347

Leelanandam, C., 88M/2856, 4411, 6189 P., Leeman, W. 88M/0744, 2265 Lees, T. C., 88M/6009 Leeuw, J. E. De, 88M/2415 Leeuw, J. W. De, 88M/0850, 0851, 1419, 2412, 2422, 2450, 4121, 5889, 5903, 5914 Leeuwen, T. M. Van, 88M/0646 Lefebvre, C., 88M/4512 Lefebvre, J. J., 88M/1007 Lefevre, C., 88M/6264 Lefevre, R., 88M/6486 Le Fort, P., 88M/1277, 3948, 4459 Le Gall, B., 88M/1163 le Gall, J., 88M/2831 Legg, I. C., 88M/5191 Legg, M., 88M/4855 Legge, P. J., 88M/5208 Leggett, J. K., 88M/2960 Legovic, T., 88M/0817 Lehmann, B., 88M/3858, 4445 Lehmann, G., 88M/3440, 5082 Lehuray, A. P., 88M/2490, 3251 Leibovitz, D. P., 88M/1671 Lein, A. Yu., 88M/4034, 5707 Leipe, T., 88M/0715 Leitch, A. M., 88M/1203 Leliwa-Kopystynski, J., \M88 4201 Lelong, F., 88M/4094 Lemarchand, F., 88M/0605 Le Mare, P. H., 88M/0225 Le Martret, H., 88M/0214 le Metour, J., 88M/2206 Lemma, M., 88M/3624 Lenat, J.-F., 88M/4576, 6244 Lenoir, F., 88M/3612 Lensch, G., 88M/1388 Lent, A. D., 88M/4756 Leo, G. W., 88M/0721, 1169 Leon, M. Iglesias Ponce de, 88M/1605 Leonard, B. F., 88M/0663 Leonard, M. W., 88M/5830 Leonov, I. D., 88M/4141 Leonova, V. A., 88M/1271 Leonova, Ye. M., 88M/2163 Leont'ev, R. L., 88M/2607 Leonwicz, M. E., 88M/1817 Lepage, C. A., 88M/6490 Lepezin, G. G., 88M/0552 Le Pichon, X., 88M/1172 Lepinay, B. Mercier de, 88M/ 4852 Lepp, N. W., 88M/3622 Lerbekmo, J. F., 88M/4046 Lerche, I., 88M/3125, 6451 Lerebour, P., 88M/1317 Lericolais, G., 88M/3555 Lerman, A., 88M/5947 le Roex, A. P., 88M/1378, 3018, 4895, 6292 Leroy, J., 88M/3875, 3890 Leroy, J. L., 88M/2280 Lescuyer, J.-L., 88M/5247

Leslie, D. M., 88M/0216 Leslie, M., 88M/5449 Lespagnard, J. Monseur, 88M/ 1877 Lespinasse, M., 88M/3890 Leterrier, J., 88M/2225 Letokhov, V. S., 88M/5709 Letolle, R., 88M/3854 Leuken, H., 88M/0232 Levashev, G. B., 88M/0729 Leventhal, J. S., 88M/2336 Leveridge, B. E., 88M/2299 Levin, K. A., 88M/2017 Levin, L. E., 88M/4609 Levin, M., 88M/5863 Levin, V. L., 88M/4315 Levine, H. M., 88M/6286 Levinson, A. A., 88M/0104, 3615, 3616, 6062 Lewis, C. A., 88M/4144 Lewis, C. F. M., 88M/3416 Lewis, C. H., 88M/0811 Lewis, C. L., 88M/4543 Lewis, K. B., 88M/6130 Lewis, R. S., 88M/5961 Lewis III, D., 88M/6434 Lewowicki, S., 88M/5008 Leyden, D. E., 88M/3326 Leyreloup, A., 88M/1124, 4710 Leyshon, P. R., 88M/1906 Leythaeuser, D., 88M/4124. 5888, 5916 Li, C., 88M/2171 Li, D., 88M/0454, 0643, 3100, 3320, 4741 Li, D.-J., 88M/1543 Li, F., 88M/6194 Li, H., 88M/3126, 5938 Li, J., 88M/3634, 4037, 5938 Li, R., 88M/0852 Li, T., 88M/6194 Li, X., 88M/3100, 4741, 4764, 5260, 6125 Li, Y., 88M/3553, 5938 Li, Y. D., 88M/3594 Li, Z., 88M/0284, 1675 Liang, D., 88M/4118 Liang, X., 88M/0454 Liao, Q., 88M/4254 Liao Zhijie, , 88M/1627 Liati, A., 88M/4724, 4725 Libelo, E. L., 88M/4301 Licence, P. S., 88M/5267 Lichte, F. E., 88M/2245 Lichtner, P. C., 88M/3653, 3806 Lickley, W. P., 88M/4005 Liebermann, R. C., 88M/5448, 6436 Liebich, B. W., 88M/1833 Liegeois, J. P., 88M/2799 Liew, T. C., 88M/5532 Liewig, N., 88M/0010 Light, T. D., 88M/2480, 2489, 2492 Lijmbach, G. W. M., 88M/4137 Likens, G. E., 88M/0402 Likhachev, A. P., 88M/1019 Lillie, R. C., 88M/6479

Lima, L. Pedroso, 88M/2462 Limbourg, Y., 88M/4333 Limke, A. J., 88M/6273 Lin, C., 88M/5258 Lin, D., 88M/0852 Lin, R., 88M/2390 Lin, R. P., 88M/0960 Lin, X., 88M/2173 Lin, Y., 88M/3357 Linares, E., 88M/3214 Linares, J., 88M/3354 Lind, C. J., 88M/0525 Lind, Th., 88M/0576 Lindberg, B., 88M/3045 Lindenmayer, Z. G., 88M/5568 Lindh, A., 88M/2678, 3202 Lindley, I. D., 88M/5268 Lindquist, L., 88M/0899 Lindqvist, B., 88M/3747, 6068 Lindqvist, J.-E., 88M/4700, 4701 Lindqvist, K., 88M/6332 Lindsay, C. G., 88M/5157 Lindsay, W. L., 88M/4001 Lindsey, D. A., 88M/0361 Lindsley, D. H., 88M/2067, 5463, 5476 Ling, W., 88M/6194 Linhardt, E., 88M/3534 Liotard, J.-M., 88M/1235, 1283, 1394, 2254, 5554, 5658 Liou, J. G., 88M/0993, 2064, 2088, 2558, 4677, 6374 Lipari, R. J., 88M/5964 Lipman, P. W., 88M/5675 Lippmann, F., 88M/4648 Lippolt, H. J., 88M/3190, 3193, 3218 Lipson, R. D., 88M/1484 Lirer, L., 88M/1303 Lister, G. S., 88M/1183 Lister, J. R., 88M/5368, 6281 Litaor, M. I., 88M/0223 Litsakes, C. N., 88M/3656-3658 Little, I. P., 88M/3430 Littlejohn, D., 88M/0403 Liu, C., 88M/0298, 0754, 0999, 2861, 5591 Liu, D., 88M/5823, 5910, 5911 Liu, F., 88M/3100, 4741 Liu, G., 88M/0642, 3231, 5505 Liu, H., 88M/5650 Liu, J., 88M/0381, 0731, 1925, 2862, 3234 Liu, K.-K., 88M/5721 Liu, L., 88M/3720 Liu, L. G., 88M/0546, 1517, 3730 Liu, M., 88M/1517 Liu, S., 88M/2391 Liu, S.-B., 88M/3691, 5121 Liu, T., 88M/5588 Liu, X., 88M/3126, 4856, 5589 Liu, Y., 88M/3320, 5592 Liu, Z., 88M/0047, 1551, 3268, 4772 Livens, F. R., 88M/5316 Livesey, N., 88M/0762 Livi, K. J. T., 88M/0987, 3466

Livi, R., 88M/6004 Livingston, H. D., 88M/1951 Livnat, A., 88M/0834 Lizarazu, J., 88M/5864 Llonch, E. Ballbe, 88M/3348 Lloyd, F. E., 88M/2776, 3012 Lloyd, G. E., 88M/1102 Lloyd, R. V., 88M/6073 Lo Bello, Ph., 88M/3209 Lobkov, V. A., 88M/5712 Locardi, E., 88M/5169 Locat, J., 88M/1774 Lochon, P., 88M/3056 Locutura Ruperez, J., 88M 3580 Lodder, M., 88M/5037 88M Lodeiro, F. Gonzalez, 6170 Lodha, G. S., 88M/4033 Lodrigueza, L., 88M/5290 Loenen, R. E. Van, 88M/5292 6027, 6028 Loeschke, J., 88M/4377 Lofgren, G. E., 88M/4214 Lofvendahl, R., 88M/2383 Logan, C. T., 88M/0400 Logan, J. M., 88M/0514, 2720 4353 Loginova, V. Ye., 88M/0079 Lo Giudice, A., 88M/4056 4717 Loglio, G., 88M/4119 Lohmann, K. C., 88M/0789 Lohn, P., 88M/5863 Loiselle, M., 88M/4410 Loiselle, M. C., 88M/1288 Lokanatha, S., 88M/3736 Loma, G. Cancer, 88M/1241 Lombardi, G., 88M/1717 Lombardi, S., 88M/4561 Lombardo, G., 88M/4554 London, D., 88M/4068 Loney, R. A., 88M/1285, 3027 Long, A., 88M/5861 Long, B. F., 88M/6311 Long, C. B., 88M/4368 Long, P. E., 88M/4600 Long, S. E., 88M/4956 Longman, M. W., 88M/4157 Longstaffe, F. J., 88M/0659 Longworth, G., 88M/5108 5110, 5137 Lonker, S. W., 88M/6013 Lonsdale, P., 88M/0654 Lonsdale, P. F., 88M/4050 Loock, G. W., 88M/4824 Loomis, T. P., 88M/5454 Loop, J., 88M/5738 Loosveld, R., 88M/3111 Lopatin, G. G., 88M/1019 Lopez-Acevedo, V., 88M/5445 Lopez de Azcona, M. C., 88M 6117, 6485 Lopez, E. Morcillo, 88M/5194 Lopez-Escobar, L., 88M/2283 Lopez Garcia, J. A., 88M/1910 3531, 3532 Lopez, J. M. Porto, 88M/0148

MacDonald, T. J., 88M/4948

Lopez, M., 88M/1235 Lopez-Montano, R., 88M/4376 Lopez-Plaza, M., 88M/1247 Lorah, M. M., 88M/0833 Lorand, J.-P., 88M/0706, 1036, 1017, 1021 Lorand, J. P., 88M/6051 Lorenc, S., 88M/1743 Loring, D. H., 88M/5692, 5936 Lorite, M. Carames, 88M/5322 Lorrain, R. D., 88M/0762 Lortie, R. B., 88M/0394 Loss, E. L., 88M/6223 Lott III, D. E., 88M/5560 Lottermoser, B. G., 88M/0810, 0983, 3868, 3954, 4308 Loubat, H., 88M/2554 Loubere, P., 88M/0761 Loubet, M., 88M/2003 Louda, J. W., 88M/2413 Louden, K. E., 88M/1549 Louis, R. M. St., 88M/4046 Lovas, G. A., 88M/1830 Loveland, P. J., 88M/0203 Loveridge, W. D., 88M/1644-1646, 1651, 1652, 3196 Low, S., 88M/3072 Lowdon, J. A., 88M/1640 Lowe, L. E., 88M/4047 Lownsbrough, R., 88M/1676 Lowson, R. T., 88M/5687 Lu, H., 88M/0298, 2168, 5505 Lu, J., 88M/1280 Lu, S., 88M/1430 Lu, Y., 88M/0031 Lu , B., 88M/0623 Luais, B., 88M/5631 Lubala, R. T., 88M/4494, 4572 Lubnin, Ye. N., 88M/2516 Luca Rebello, A. De, 88M/4078 Lucas, A. J., 88M/5897 Lucas, H. F., 88M/0047 Lucazeau, F., 88M/2770 Lucchesi, S., 88M/0981, 0982 Lucchetti, G., 88M/0986, 1073 Lucchi, F. R., 88M/2896 Luchitskaya, M. I., 88M/5927 Luck, J.-M., 88M/0482 Lucotte, M., 88M/5735 Ludden, J., 88M/6210 Ludden, J. N., 88M/3219 Luders, V., 88M/2647 Ludka, I. P., 88M/6225 Ludman, A., 88M/6138 Lueck, A., 88M/6328 Luecke, W., 88M/5409 Luft, E., 88M/0963 Luger, S., 88M/0263, 1815 Lugmair, G. W., 88M/1123, Lugovaya, I. P., 88M/2344 Lugowski, J., 88M/2325, 5399 Lukashin, V. N., 88M/5806 Lummen, G. van Marcke de,

88M/3812

3122

Lumpkin, G. R.,

Lumsden, D. N., 88M/6073

88M/0975,

Luna, S., 88M/0114 Lunar, R., 88M/5248 Lunar Hernandez, R., 88M/0342 Lund, C.-E., 88M/2674 Lundager Madsen, H. E., 88M/ 2055 Lundegard, P. D., 88M/5792 Lundgren, P., 88M/4853 Lundholm, I., 88M/0899 Lundqvist, J., 88M/3200 Lundqvist, Th., 88M/3040 Lundstrom, I., 88M/2681 Lunel, A. T., 88M/1263 Luo, S., 88M/0085 Lupton, J. E., 88M/4050, 4219 Luque del Villar, F. J., 88M/ 5445, 6473 Luth, R. W., 88M/0447, 5390, 5391, 5482 Luther III, G. W., 88M/3761, 5841 Lutke, F., 88M/6329 Lutz, H. D., 88M/3502 Lutz, T. M., 88M/0020, 5636 Luukkonen, E. J., 88M/0006 Lux, G., 88M/0466 Luz, B., 88M/3616 Luzgin, B. N., 88M/4687, 4844 Lyakhovich, T. T., 88M/5557 Lyakhovich, V. V., 88M/0726, 2691, 5557 Lyakhovitch, T. T., 88M/2162 Lyakovitch, V. V., 88M/4443 Lyapunov, S. M., 88M/2235, 4002 Lydon, J. W., 88M/1869, 2186 Lyle, M., 88M/0779 Lynas, B. D. T., 88M/6112 Lynch, D. C., 88M/5367 Lynch, D. F., 88M/3443 Lynch, S., 88M/4974 Lyon, G. L., 88M/5828 Lyons, J. B., 88M/0040 Lyons, W. B., 88M/4098 Lyul, A. Yu., 88M/5978 Ma, X., 88M/1590

Ma, X. D., 88M/1070 Ma, Z., 88M/1796 Maaloe, S., 88M/1192, 2025. 6232 Maass, O. C., 88M/1746 Maassen, L. W., 88M/0890 Maboko, M. A. H., 88M/4059 Macaire, J.-J., 88M/5029 Macaluso, A., 88M/2379 MacArthur, D., 88M/1070 Macaudiere, J., 88M/6408 Macauley, G., 88M/2443 Macchi, L., 88M/3396 Macciotta, G., 88M/6223 Macdonald, A. S., 88M/1892, 2700 Macdonald, D. I. M., 88M/2994 Macdonald, K. A., 88M/3515 Macdonald, K. C., 88M/6296 88M/1211, Macdonald, R., 2796, 6157

Macdougall, J. D., 88M/4076 MacEachern, I. J., 88M/2475 Macedo, C. A. R., 88M/0012, 1245 Macedonio, G., 88M/4597 Macek, J., 88M/3092 MacGowan, D. B., 88M/5793 Mach, D. L., 88M/5893 Machado, F., 88M/1556 Machado, M. J. do C., 88M/ 4950 Machado, N., 88M/4912 Machel, H.-G., 88M/4329 Machetel, P., 88M/4775 Machihara, T., 88M/2438 Macia, J. G. de Pablo, 88M/ 6170 Macias, F., 88M/3423 Macias Vazquez, F., 88M/0205, 0206 Macias, F., 88M/5030, 5031, 5323 Macintyre, R. M., 88M/2891, 5581 Mack, L. E., 88M/4669 Mackenzie, A. S., 88M/4124, 5916 Mackenzie, D. E., 88M/6129 Mackenzie, F. T., 88M/0537 Mackenzie, J. S., 88M/4403 MacKenzie, K. J. D., 88M/5126 Mackenzie, R. C., 88M/3351 MacKenzie, W. S., 88M/0450 Mackie, A., 88M/1144 Mackie-Dawson, L. A., 88M/ Mackin, J. E., 88M/2337, 3377 MacKinney, J. A., 88M/5112 Mackinnon, I. D. R., 88M/1715, 2517 Mackovicky, E., 88M/3258 Mackovicky, M., 88M/3258 Mackrodt, W. C., 88M/5133, 5136, 5407 Macleod, S., 88M/4930 Macnish, S. E., 88M/3430 Macquar, J.-C., 88M/1417, 3577 Macqueen, R. W., 88M/2330 88M/0945. Macrae, N. D., 3290, 5553, 5945 Madariaga, G., 88M/0234 Madden, J. S., 88M/2205, 3924 Maddock, R. H., 88M/2812 Maddox, S. J., 88M/1412 Madhavan, V., 88M/6189 Madhusudana Rao, C., 88M/ 3409 Madsen, B. C., 88M/1693 Madsen, H. E. Lundager, 88M/ 2055 Madsen, I. C., 88M/0272, 2661, 3270 Madureira Filho, J. B. M., 88M/2880 Maeda, J., 88M/4507 Maest, A. S., 88M/5788 Maezato, Y., 88M/0497

Magaritz, M., 88M/0753, 0755, 0768, 2288, 2310, 3865, 4021 Magat, P., 88M/3612 Maggetti, M., 88M/4860, 6398 Magne, R., 88M/2152 Magro, G., 88M/4537, 6238 Maguire, P. K. H., 88M/2688 Magyar, M. J., 88M/0485, 3559 Mahadevan, T. M., 88M/3551, 5181 Mahannah, R., 88M/5732 Mahapatra, S. S. R., 88M/0635 Maher, B. A., 88M/3753 Maher, K. A., 88M/4847 Maher, W. A., 88M/4101 Maher Jr. H. D., 88M/6427 Mahesh Babu, M., 88M/4393 Mahjoub, Y., 88M/2721 Mahler, B., 88M/4089 Mahmood, A., 88M/2693 Mahmood, K., 88M/2611 Mahon, W. A. J., 88M/6230, 6280 Mahood, G. A., 88M/1358, 4532 Mai, J., 88M/2039 Maianu, A., 88M/3434 Maiden, K. J., 88M/0318, 0369 Mailhe, D., 88M/0974, 3253 Maillet, P., 88M/3243, 6264 Main, W. deL., 88M/0357 Mainprice, D., 88M/3029, 6376, 6439 Maiorani, A., 88M/0609, 0981 Mair, B. F., 88M/4407 Mair, S. L., 88M/3443 Maithani, P. B., 88M/3550 Maj, S., 88M/6440 Majoor, F. J. M., 88M/3212 Majoros, Gy., 88M/6241 Majumdar, N., 88M/2572 Majumdar, S., 88M/0635 Majumder, T., 88M/4142, 6054 Makarov, A. P., 88M/0530 Makato Shima, , 88M/0938 Makino, R., 88M/0425 Makovicky, E., 88M/3499, 3500, 3503 Makovicky, M., 88M/2089 Makrygina, V. A., 88M/1514 Maksimova, I. G., 88M/0057, 0732 Malard, C., 88M/0111, 1802 Malavielle, J., 88M/2712, 2724 Malcolm, R. L., 88M/2447 Maleev, M. N., 88M/1510 Malihan, T. D., 88M/5288 Malikov, A. V., 88M/4545 Malin, M. C., 88M/1340, 5952 Malinconico, L. L., 88M/1345, 2662, 2663 Malinconico Jr, L. L., 88M/ 2884 Malinconico, M. L., 88M/1083, 2662, 6091 Malinin, S. D., 88M/3686, 5389 Malinov, O., 88M/2634 Malinovskaya, Ye. K.,

Malinovskiy, I. Yu., 88M/0548 Malisa, E., 88M/2547, 3084 Maliva, R., 88M/2009 Mall, A. P., 88M/2857 Malla, P. B., 88M/0141, 3370 Mallett, C. W., 88M/6128 Mallinson, T. J., 88M/6208 Malmstrom, L., 88M/4878 Malone, G. B., 88M/2927 Malpas, J., 88M/4705 Maltman, A. J., 88M/1147, 6102 Maluski, H., 88M/1633 Malvin, D. J., 88M/1998 Malyshev, A. G., 88M/5300 Malyshev, B. I., 88M/2342 Malysheva, T. V., 88M/5116 Malyuk, B. I., 88M/2732, 2851 Malyuk, G. A., 88M/2134 Mamchur, L. P., 88M/4149 Mamedov, R. G., 8814/5038 Mamyrov, E., 88M/5351 Manas, M. G., 88M/5147 Manceau, A., 88M/3382, 5143 Mancktelow, N. S., 88M/1160, 4716 Mandal, N., 88M/1103 Mandal, R., 88M/0527 Mandarino, J. A., 88M/1100, 2623, 2667, 4846 Manent, L. S., 88M/4199 Manent, S. Martinez, 88M/3348 Manetti, P., 88M/1316 Mangas, J., 88M/1908 Mangrich, A. S., 88M/2456 Manheim, F. T., 88M/1662 Maniar, P. D., 88M/0072 Mann, A. C., 88M/2894 Mann, A. G., 88M/0329 Mann, A. W., 88M/2178, 3297 Mann, D. R., 88M/3621 Mann, H., 88M/2399, 4328 Mann, K. J., 88M/0927 Mann, R. W., 88M/6371 Mann, S., 88M/4328 Manning, C. E., 88M/6148 Manning, D. A. C., 88M/5891 Mannucci, G., 88M/2589, 3507 Mansker, W. L., 88M/4427 Manson, D. V., 88M/3478 Mantler, M., 88M/3305, 3324 Manton, W. I., 88M/4897 Mantovani, M., 88M/4080 Manuylova, M. M., 88M/5644 Manzon, B. M., 88M/5949 Mao, H. K., 88M/0432 Mao, J., 88M/3904, 4502, 5204 Mao, X.-Y., 88M/2539 Maqueda, C., 88M/3368 Maquil, R., 88M/4251 Marchand, J., 88M/1470 Marchig, V., 88M/2341, 3558 Marcialis, R. L., 88M/2514 Marcke de Lummen, G. van, 88M/3812 Marco, A. De, 88M/2975 Marcos Pascual, C., 88M/1507

Marcoux, E., 88M/3528, 3889, Marcoux, J., 88M/2713 Mare, P. H. Le, 88M/0225 Maree, B. D., 88M/6335 Marfil, R., 88M/2972 Mariano, A. N., 88M/1070 Marignac, C., 88M/3936, 4306, 5586 Mariko, T., 88M/1047 Marimoto, N., 88M/0969 Marin, L., 88M/1223 Marin, Yu. B., 88M/0581 Marina, M. M., 88M/0846 Marinas, J. M., 88M/0114 Marinenko, J., 88M/2497 Mariner, R. H., 88M/0745 Maring, H. B., 88M/2396 Maringer, F., 88M/5882 Marini, C., 88M/2463 Marini, D., 88M/3577 Marini, F., 88M/1236 Mariolacos, K., 88M/0444 Marion, P., 88M/0614 Maris, C., 88M/2453 Markert, H., 88M/1526, 1539 Markl, G., 88M/4810 Markova, O. M., 88M/3708, 5949 Markovskii, B. A., 88M/4244 Markowicz, 'A. A., 88M/0073, 1661, 4959 Maroto, A. Gutierrez, 88M/ 0630, 1877, 5194, 6069 Marquer, D., 88M/2721 Marquez, N., 88M/0985 Marquis, F., 88M/5895 Marquis, R., 88M/5236 Marriner, G. F., 88M/0685 Marroni, M., 88M/2939 Marsh, B. D., 88M/0739, 6268 Marsh, J. S., 88M/0674 Marsh, J., 88M/3944 Marsh, N. G., 88M/0682 Marsh, S. P., 88M/0295 Marshall, B., 88M/1843, 1849, 1853 Marshall, B. T., 88M/0785 Marshall, D. D., 88M/6021 Marshall, G. D., 88M/1679 Marshall, J. R., 88M/0934 Marshall, L. A., 88M/1298 Marshukova, N. K., 88M/2127, 2149 Marsii, I. M., 88M/2557 Marsiy, I. M., 88M/2559 Martchak, V. P., 88M/0582 Martell, A. E., 88M/2362 Martens, C. S., 88M/0412-0415, 4159 Martin, A., 88M/4571 Martin, C., 88M/1735 Martin, C. Casquet, 88M/0340 Martin, D., 88M/1185, 6146 Martin, D. D., 88M/2114 Martin del Pozzo, A. L., 88M/ 1365 Martin, F., 88M/5918 Martin, F. Mingarro, 88M/6117

Martin, G. J., 88M/1484 Martin, H., 88M/2673, 2821 Martin, J. A. Gonzalez, 88M/ 6236 Martin, J. B. Alvarez, 88M/ 6069 Martin, J. E., 88M/5302 Martin, J. M., 88M/1878, 3286, 3625 Martin, R. F., 88M/0460, 0740, 1811, 2592, 2594, 2798, 4488 Martin, S. F., 88M/6413 Martincic, D., 88M/3630 Martinez, C. de la Casa, 88M/ 6485. Martinez Catalan, J. R., 88M/ 6170 Martinez Frias, J., 88M/5248 Martinez Manent, S., 88M/3348 Martini, M., 88M/0712, 4538, 4541, 4551, 4604, 5492, 6238 Martinotti, W., 88M/5324 Martins, J. Avila, 88M/1380 Martins, L. M. P., 88M/1881 Martins de Azevedo, J. M., 88M/1380 Martin-Vivaldi, J. L., 88M/5435 Martiny, E., 88M/2353, 3281 Martret, H. Le. 88M/0214 Marty, B., 88M/0592, 3291 Marty, J.-C., 88M/2440 Martyn, J. E., 88M/0977, 3108 Maruejol, P., 88M/4918 Marumo, F., 88M/0241, 0277 Marushkin, A. I., 88M/4149 Maruyama, S., 88M/0993, 2088, 2558, 4677, 6374 Marvasti, A., 88M/1933 Marza, I., 88M/6331 Marzoni Fecia di Cossato, Y., 88M/6081 Masaitis, V. L., 88M/4235 Masako Shima, , 88M/0938 Masi, U., 88M/0906, 2154, 3863, 5700 Maslen, E. N., 88M/5156 Maslennikov, V. A., 88M/3091 Mason, B., 88M/2538, 2552 Mason, R., 88M/4480 Mason, R. A., 88M/5573 Massare, D., 88M/4439 Masschelein, W. J., 88M/5320 Masse, P., 88M/1161 Masselot, L., 88M/4550 Massias, J., 88M/5321 Masson, P., 88M/4203 Masson, P. L., 88M/4200, 4202 Massone, H.-J., 88M/1213 Massonne, H.-J., 88M/0561 Massoth, G. J., 88M/3177, 4109, 5835 Mast, M. A., 88M/2008 Masters, J. M., 88M/4179 Masters, P. M., 88M/4129 Mastrolorenzo, G., 88M/1303 Masuda, A., 88M/5652 Masursky, H., 88M/4207 Mata, J., 88M/2898 Mata-Perello, J. M., 88M/4303

Mateika, D., 88M/5534 Matejovska, O., 88M/2352 Mathai, J., 88M/1548 Mathers, S. J., 88M/4630 Mathewes, R. W., 88M/6272 Mathews, W. H., 88M/4944 Mathez, E. A., 88M/2264 Mathieu, G., 88M/5343 Mathison, C. I., 88M/28650 6200 Mathur, B. K., 88M/3736 Matias, V. V., 88M/5552 Matis, Ye. Ya., 88M/4122 Matsubara, S., 88M/4261 Matsuda, J., 88M/0953 Matsuhisa, Y., 88M/1752, 2142 2282 Matsui, K., 88M/1761 Matsui, T., 88M/4192 Matsukura, Y., 88M/3845 Matsumoto, G. I., 88M/2438 Matsumoto, S., 88M/0439 Matsumoto, T., 88M/5124, 5125 Matsunaga, K., 88M/5331 Matsuo, S., 88M/4540, 6238 Matsuura, S., 88M/4241 Mattey, D. P., 88M/0711, 3852, 5755 Matthess, G., 88M/3695 Matthews, A., 88M/0483, 3802, 5529, 6401 Matthews, D. L., 88M/1781 Matthies, S., 88M/2729 Mattias, P., 88M/0168, 1757 Mattila, E., 88M/2202 Mattinson, J. M., 88M/3197, 3241 Mattioli, G. S., 88M/0524, 5417 Mattioli, V., 88M/1575, 2553 Mattison, G. D., 88M/2278 Matveyeva, L. I., 88M/5686 Matyash, I. v., 88M/3452 Matyushin, L. V., 88M/2342 Maude, R., 88M/1149 Maund, J. G., 88M/4895 Maurel-Palacin, D., 88M/1880 Maurette, M., 88M/0508, 0955 Maurice, P., 88M/0002, 5328 Mauritsch, H., 88M/1527 Maurrasse, F., 88M/5677 Maury, R., 88M/2140 Maury, R. C., 88M/4509 Mawer, C. K., 88M/1177, 2711 Max, M. D., 88M/1234, 1603, 4054, 4366, 4368 Maxwell, J. R., 88M/2410, 2432 May, F., 88M/4357 Mayeda, T. 88M/5533, 5957, 5971 Mayer, I., 88M/0239 Mazacova, I., 88M/0128 Mazerolle, F., 88M/3266 Mazor, E., 88M/5794, 5813 5871, 5905, 6238 Mazumdar, A. C., 88M/6008 Mazurier, A., 88M/5153 Mazurkevich, A. P., 88M/5685 Mazzella, A., 88M/1857, 2463

/azzetti, G., 88M/2609 /azzi, F., 88M/3490 /azzone, P., 88M/6022 Mazzucchelli, R. H., 88M/0875 McArdle, P., 88M/3054, 3574, McArthur, J. M., 88M/3998 McBirney, A. R., 88M/0097, 0752, 1198, 4594 McBratney, A. B., 88M/0129 McBride, D. E., 88M/1895 McBride, E. F., 88M/1443, 4669 McBride, M. B., 88M/0132 McBride, S. L., 88M/0046 McCabe, R., 88M/2255 McCafferty, P. B., 88M/3295 McCaig, A. M., 88M/1158 McCallum, I. S., 88M/0389, 4438 McCallum, M. E., 88M/2735, McCallum, W. S., 88M/0383 McCandless, T. E., 88M/4428 McCarthy, G. J., 88M/0070, 3276, 3434, 4922, 4925 McCarthy, T. S., 88M/1422 McCauley, J. F., 88M/4186 McClay, K., 88M/3335 McClelland, E. A., 88M/4785 McConachy, G. W., 88M/0384 McConachy, T. F., 88M/2180 McConnell, J. W., 88M/0916 McCorkle, D. C., 88M/5766 McCormick, A. G., 88M/0009 McCormick, T. C., 88M/1025, 1809, 6438 McCourt, W. J., 88M/0045 McCrank, G. F., 88M/1972, 3116 McCross, A. M., 88M/1104 McCue, K., 88M/6133 McCulloch, M. T., 88M/2866, 3918, 3953, 5757 McCuster, L. B., 88M/3486 McDermott, F., 88M/0591 McDonnell, J. A. M., 88M/5989 McDonnell, M. J., 88M/6131 McDonough, W. F., 88M/3953 McDougall, I., 88M/1597, 1639, 3223 McDowell, G. D., 88M/6230 McDowell, S. D., 88M/6373 McDuff, R. E., 88M/0825, 3881 McEvoy, J., 88M/5891 McFadden, E., 88M/0859 McFadden, L. D., 88M/1447 McFadgen, B. G., 88M/4908 McFarlane, M. J., 88M/4625 AcGarvie, D. W., 88M/2828 AcGee, E. S., 88M/2735 AcGee, J. J., 88M/2509 AcGee, W. A., 88M/5206 McGeehin, J. P., 88M/1656 AcGibbon, K. J., 88M/3138 AcGlone, M. S., 88M/5334 AcGowan, K. I., 88M/2482

McGregor, V. R., 88M/2811,

4697

McHardy, W. J., 88M/1716 McHugh, J. B., 88M/5781 McIver, J. R., 88M/1422 McKay, D., 88M/4433 McKay, G. A., 88M/3721 McKay, W. J., 88M/0385 McKeag, S. A., 88M/3599 McKee, B. A., 88M/2401 McKee, E. H., 88M/0693 McKeegan, K. D., 88M/2518 McKenna, L. W., 88M/0429 McKenzie, C. D., 88M/1045 McKenzie, D., 88M/1376, 1554 McKenzie, D. P., 88M/4607 McKenzie, R. M., 88M/0220 McKibben, M. A., 88M/5545, 5789 McKie, C., 88M/1702 McKie, D., 88M/1702 McKnight, D. G., 88M/0357 McKnight, D. M., 88M/5842 McLaren, J. W., 88M/4949 McLarty, E., 88M/1975 McLennan, S. M., 88M/1114, 5761 McLeod, R. C., 88M/2588 McLeod, R. L., 88M/5214, 5558 McLimans, R. K., 88M/5791 McMillan, K., 88M/4600 McMillan, P., 88M/0242, 2074 McMillan, P. F., 88M/2071, 5362 McMillan, W. J., 88M/2479 McMullan, R. K., 88M/5098 McMurdie, H. F., 88M/1011, 3446, 4286 McMurtry, G. M., 88M/0652 McNaughton, N. J., 88M/3840, 3909, 4906, 6254 McNeil, A. M., 88M/1995 McNeill, D. F., 88M/1978 McNutt, R. H., 1974, 3822, 5784 88M/1647, McNutt, S. R., 88M/1351 McPherson, A., 88M/6031 McPhie, J., 88M/6251 McQueen, K. G., 88M/1856 McSween Jr, H. Y., 88M/2527, 4757 Meadows, A. J., 88M/5988 Means, W. D., 88M/2716 Meares, R. M. D., 88M/5930 Mearns, E. W., 88M/6150 Mechiche, M., 88M/5751 Medenbach, O., 88M/1091, 6089 Medhioub, M., 88M/6036 Medici, C., 88M/1757 Medina Nunez, J. A., 88M/1877 Medved, J., 88M/3281 Medvedeva, L. S., 88M/3697 Medvedovskaya, 88M/3899 Mee, J. S., 88M/2497, 4184 Meen, J. K., 88M/0743, 4419, 6217 Megard, F., 88M/3976 Mehnert, H. H., 88M/6276 Mehnert, K. R., 88M/4350, 4351

Mehrotra, B. N., 88M/0277 Mei, Y., 88M/3903 Meighan, I. G., 88M/0009 Meijer, E. L., 88M/0130 Meilliez, F., 88M/1156 Meinert, L. D., 88M/0391 Meinhold, R. H., 88M/5126 Meisser, N., 88M/2639 Mejdahl, V., 88M/3200 Mekhtiev, Sh. F., 88M/0769 Mekhtiyeva, V. L., 88M/0770 Mel'chakova, L. V., 88M/0457 Melenevskiy, V. N., 88M/0552 Melfi, A., 88M/0393 Melfi, A. J., 88M/2286, 5681, 6333 Melgarejo, J.-C., 88M/2153 Melis, F., 88M/2463 Melkote, S., 88M/6351 Mellinger, M., 88M/2334 Mellini, M., 88M/0253, 1803. 5101, 6037 Mellors, R. A., 88M/4596 Mel'nikov, P. V., 88M/4768 Meloni, S., 88M/5324 Melosh, H. J., 88M/0957 Melson, W. G., 88M/6279 Melton, C. E., 88M/3132 Menchetti, S., 88M/3495 Mendelssohn, M., 88M/3852 Mendelssohn, M. J., 88M/3851 Mendis, D. A., 88M/0960 Mendoza, Y. A., 88M/0840, 0841 Meneghel, L., 88M/2217 Meng, X., 88M/1429 Mengel, K., 88M/2234 Menot, R.-P., 88M/1238, 3059, 4886 Menuge, J. F., 88M/1190, 5748 Menyailov, I. A., 88M/4583 Menza, S., 88M/4556 Menzies, M., 88M/2784 Menzies, M. A., 88M/0713, 1126, 1707, 2736, 2781, 3015-3017 Mercado, A. C., 88M/5289, 5290 Merceron, T., 88M/3356, 3934, 4685, 5016 Mercier, A., 88M/6393 Mercier, J.-C. C., 88M/6293, 1391 Mercier de Lepinay, B., 88M/ 4852 Mercolli, I., 88M/3022 Merkle, R. K. W., 88M/2615 Merks, A. G. A., 88M/2425 Merle, O., 88M/1107, 2710 Merlet, C., 88M/2194 Merlin, O. H., 88M/3635 Merlino, S., 88M/0253, 1795, 3459, 3484, 5106 Merlivat, L., 88M/2393, 2394 Merlo, D., 88M/3312 Mermut, A. R., 88M/3388 Merriman, R. J., 88M/1138, 1327, 4706, 4883 Mertz, D. F., 88M/3069

Mertzman, S. A., 88M/1208 Merwe, N. J. van der, 88M/ 1962 Meshick, A. P., 88M/3192 Meshik, A. P., 88M/5711 Messiga, B., 88M/0979, 6145 Metcalf, G. S., 88M/0862 Metcalf, M., 88M/1529 Metour, J. le, 88M/2206 Metrich, N., 88M/1248 Metson, A. J., 88M/5047 Metson, J. B., 88M/5945 Metwalli, M. H., 88M/2984 Metz, G. W., 88M/3770 Metz, P., 88M/3700, 5491 Metz, P. A., 88M/5237 Meulemans, A., 88M/1659 Meunier, A., 88M/0164, 3356, 3890, 3934, 4685, 5016 Meunier, J. D., 88M/2449 Meuzelaar, H. L. C., 88M/0862 Meval, C., 88M/1401, 0997 Mew, G., 88M/5043, 5045, 5052 Meybeck, M., 88M/2361, 4083, 5779 Meyer, G., 88M/3927 Meyer, H. O. A., 88M/2735, 2738, 2766 Meyer, K.-D., 88M/4456 Meyer, M., 88M/0311, 5176 Meyer, T., 88M/1570 Meyers, R. E., 88M/3547 Mezzetti, R., 88M/0167 Mgaloblishvili, I. Z., 88M/1490 Mhitaryan, D. V., 88M/4686 Mian, I., 88M/4900 Michael, P. J., 88M/1399, 3872, 3916 Michaels, A. F., 88M/2397 Michailidis, K., 88M/1000, 2570 Michalski, T., 88M/5814 Michard, A., 88M/1223, 1620, 2304, 2347, 3944, 3975, 5764, 5812 Michard, G., 88M/0011, 0494, 2010, 2376, 3800, 4085, 5764 Michaud, L., 88M/0178, 1586 Michel, D., 88M/0759, 1900 Michel, F. A., 88M/1058, 5943 Michel, J.-J., 88M/0629 Michelot, J.-L., 88M/3831 Michon, G., 88M/4475 Michot, J., 88M/4441 Mickelson, M., 88M/0003 Middelburg, J. J., 88M/2051, Middleton, R., 88M/0613, 1413, 5935, 5972 Miehe, G., 88M/5152 Mierzejewski, M. P., 88M/4442 Mifsud, A., 88M/0119 Mighell, A. D., 88M/1788 Mignon, R., 88M/1876 Mihajlov, J., 88M/0030 Mikhaylichenko, O. A., 88M/ 3135 Miki, T., 88M/4744 Miklishanskiy, A. Z., 88M/4104

Miklos, J., 88M/2353 Mikucionis, V., 88M/6444 Miles, D. L., 88M/2374, 3828 Miles, M., 88M/3833 Miles, N., 88M/0182 Milesi, J. P., 88M/3579 Millard Jr, H. T., 88M/2256, 4238 Mille, G., 88M/4132 88M/3851, Milledge, H. J., 3852 Miller, A. D., 88M/2085 Miller, C., 88M/3074 Miller, C. F., 88M/3769 Miller, C. K., 88M/3562 Miller, Ch., 88M/5749 Miller, D. R., 88M/6134 Miller, G. H., 88M/0969, 0971 Miller, J. J., 88M/3385 Miller, J. M. G., 88M/6345 Miller, L. G., 88M/4165 Miller, R. B., 88M/4620 Miller, R. N., 88M/0788, 0791 Miller, S. A., 88M/5162 Miller, T. P., 88M/1350 Millero, F. J., 88M/3692 Milliken, K. L., 88M/1443 Millin, P., 88M/3087 Millot, F., 88M/3759 Mills, A. L., 88M/0507 Mills, G. L., 88M/0859 Millward, D., 88M/6157 Millward, G. E., 88M/3696 Milne, A. J., 88M/1175 Milnes, A. R., 88M/2321, 2993, 3426, 4274 Milodowski, A. E., 88M/0489, 3673, 4011, 5810 Miloslavski, I., 88M/3352, 4994 Milton, D. J., 88M/4915 Milton, G. M., 88M/1968, 2185 Milyutin, S. A., 88M/1515 Min, M., 88M/5257 Minai, Y., 88M/2323 Minamishin, M., 88M/2356 Minceva-Stefanova, J., 88M/ 1039 Mineyev, S. D., 88M/5474 Ming, C.-I., 88M/5446 Ming, D. W., 88M/1014, 1442, 3259, 3383 Ming, T., 88M/4224, 4225 Mingarro, F., 88M/6485 Mingarro Martin, F., 88M/6117 Mingelgrin, U., 88M/1726 Minh, Dang Vu, 88M/0930, 5948 Minier, J., 88M/4539 Minissale, A. A., 88M/1302, 2378 Min'kin, I. M., 88M/5685 Minster, D., 88M/2092 Minster, J. F., 88M/2381 Mintser, E. F., 88M/5612 Miola, R. J., 88M/4622 Miranda, A. M., 88M/2208 Mironenko, M. V., 88M/4036 Mironov, A. G., 88M/0532, 5371

Mironova, O. F., 88M/4036, 5923 Mirsal, I. A., 88M/3979 Mirzoev, R. Kh., 88M/0769 Misenheimer, M. E., 88M/1790 Miser, D. E., 88M/4039 Mishin, V. I., 88M/0640 Mishra, A. K., 88M/0635 Mishra, R. N., 88M/4389, 4390 Mishra, V. K., 88M/0208 Mishra, V. P., 88M/4388 Misic, M., 88M/4093 Misiorowski, E. B., 88M/5521 Miskovsky, J.-C., 88M/0093 Misra, B. K., 88M/4658 Misseri, M., 88M/2842 Mitchell, D. L., 88M/0960 Mitchell, J. G., 88M/0004, 1137, 1622, 2248, 3224, 4882 Mitchell, K., 88M/5997 Mitchell, R. H., 88M/2734, 2844, 4433, 4513, 5564 Mitchell, R. S., 88M/4839-4842, 6080, 6371, 6482, 6483 Mitropoulos, P., 88M/0682, 2222 Mittwede, S. K., 88M/6303 Mityushkin, N. T., 88M/0289 Miyake, M., 88M/0241, 2069, 3744, 5469 Miyamoto, M., 88M/0953 Miyano, T., 88M/0347, 1448, 3085 0446, Miyata, T., 88M/2082, 2083 Miyawaki, R., 88M/5089 Miyazaki, K., 88M/3104 Miyoshi, T., 88M/1999 Mizota, C., 88M/1752 Mizuike, A., 88M/1692 Mizutani, Y., 88M/5824 Mladeck, M. H., 88M/4337 Mo, S., 88M/2173 Moats, M. A., 88M/4414 Mochalov, A. G., 88M/0285 Modene, J. S., 88M/0656 Modreski, P. J., 88M/0965 Moelo, Y., 88M/3889 Moge, B., 88M/2303 Mogessie, A., 88M/4300, 5629 Mogk, D. W., 88M/4620 Moh, G. H., 88M/1055 Mohan, M. S., 88M/5608 Mohan, S. V. Ram, 88M/4990 Mohanty, B. K., 88M/0635 Mohapatra, B. K., 88M/1015 Mohaptra, B. K., 88M/6050 Mohr, P., 88M/2830, 3207 Mohr, P. A., 88M/5611 Moine, B., 88M/1907 Moiseyenko, V. G., 88M/5604 Moiseyev, B. M., 88M/4768 Mokhov, A. V., 88M/1097, 2853 Mokhtari, A., 88M/0998 Mokma, D. L., 88M/3432 Moldowan, J. M., 88M/2416 Molenaar, N., 88M/2969, 6326 Molin, G. M., 88M/5101 Molinar, G. F., 88M/0424 Molinaroli, E., 88M/3635, 6348

Moliner, R., 88M/4284 Moller, N., 88M/5401 Molyneux, S. G., 88M/1143 Momoda, M., 88M/3750 Momoi, H., 88M/3733, 5462 Monaghan, M. C., 88M/0404, 2120 Monchoux, P., 88M/4289, 4712 Mond sir, H., 88M/0566 Mondequer, A., 88M/3545 Monfray, P., 88M/5328 Monge, F., 88M/4852 Monhemius, A. J., 88M/0100 Monie, P., 88M/1633 Monier, G., 88M/4269 Moniot, R. K., 88M/4210 Monjaret, M.-C., 88M/3243 Monlau, J., 88M/4852 Monnier, A., 88M/1840 Monseur Lespagnard, J., 88M/ 1877 Montealegre, I., 88M/0765 Monteith, S., 88M/0781 Montel, J.-M., 88M/6166 Montel, Y., 88M/2385 Montenat, C., 88M/1161, 1162 Montero, W., 88M/1368 Monterrubio, S., 88M/5445 Monterrubio Perez, S., 88M/ 0342 Montez, B., 88M/0273, 1784 Montgomery, A. F., 88M/3141 Montgomery, C. W., 88M/5763 Montgomery, J. R., 88M/1654 Monthioux, M., 88M/2449 Montoriol, J., 88M/4821 Montoriol-Pous, J., 88M/4303 Montoya, M. Doval, 88M/6026 Monzier, M., 88M/6264 Mook, W. G., 88M/5907 Moon, K. J., 88M/0871 Moorbath, S., 88M/1117, 5682 Moore, C. B., 88M/4940 Moore, D. M., 88M/0122 Moore, G. L., 88M/4947 Moore, H. J., 88M/1348 Moore, J. G., 88M/4592 Moore, J. M., 88M/0096, 5952 Moore, J. N., 88M/4113, 5838 Moore, M., 88M/5064, 5129 Moore, P. B., 88M/3484, 6261 Moore, P. R., 88M/5655 Moore, R. B., 88M/1341 Moore, R. M., 88M/3696 Moore, W., 88M/5531 Moore, W. B., 88M/4519 Moore, W. S., 88M/4107, 4182, 5732, 5803 Moores, E. M., 88M/6288 Moorhouse, S. J., 88M/4359 Moorhouse, V. E., 88M/4359 Moort, J. C. van, 88M/4177, 5222 Mopper, K., 88M/2452 Mora, C. I., 88M/5112 Mora, S. J. de, 88M/0926 Morad, S., 88M/0161, 1010, 1409, 1410, 2573, 6041, 6313

Morales, L. D., 88M/1368 Morand, V. J., 88M/6034 Morandi, N., 88M/0167 Moran Zenteno, D. J., 881 4857 Moravek, P., 88M/0337 Morawski, T., 88M/3400 Morbidelli, L., 88M/0014, 622 Morcillo Lopez, E., 88M/5194 Moreau, B., 88M/3034 Morel, F. M. M., 88M/0925 Morency, M., 88M/2269 Moreno Gutierrez, A., 88N 0630, 5194, 6069, 5018 Moresi, M., 88M/5632 Morey, G. B., 88M/5241 Morgan, P., 88M/4774 Morgan VI, G. B., 88M/4068 Morgan-Jones, M., 88M/2374 Mori, H., 88M/3717, 5970 Morikawa, H., 88M/0277 Morimoto, M., 88M/6014 Morimoto, N., 88M/4230 Morinaga, K., 88M/2061 Morinaga, S., 88M/5904 Morley, C. K., 88M/1133, 113 Morlot, G., 88M/4784 Morrell, B. G., 88M/3622 Morrice, M. G., 88M/1393 Morris, E. M., 88M/3334, 4429 Morris, J. H., 88M/2689, 2961 Morris, P. A., 88M/4404 Morris, R. C., 88M/3702 Morris, W. A., 88M/3142, 4753 Morrison, G. W., 88M/5275 Morrison, J., 88M/5670, 5746 Morrison, J. O., 88M/078 6350 Morrison, M. A., 88M/220 2823, 6152 Morrison, P. D., 88M/4070 Morrison, R. J., 88M/012 0131, 0211-0213, 0441, 5048 Morrison, S. J., 88M/0364 Morse, J. W., 88M/3287, 4311 Morse, R. D., 88M/0408 Morse, S. A., 88M/1232 Morshina, T. N., 88M/4000 Morteani, G., 88M/5250 Morten, L., 88M/2207, 2743 Mortensen, J. K., 88M/1654 Mortimer, N., 88M/6271 Mortimore, R. N., 88M/4632 Mortlock, A. J., 88M/1638 Mortlock, R. A., 88M/2363 Morton, A. C., 88M/4630, 631 Morton, R. A., 88M/4116 Morton, R. D., 88M/066 1437, 2187, 5537 Moseley, F., 88M/4379 Moser, B., 88M/2563 Moser, H., 88M/5854 Moses, C. O., 88M/0507 Moshrif, M. A., 88M/1424 Mosier, E. L., 88M/0921 Moskalenko, N. I., 88M/4195 Moskowitz, B. M., 88M/1532 Moss, S. C., 88M/1790 Mosser, C., 88M/1719

Mossman, D. J., 88M/0397 Mossmann, J.-R., 88M/0010 Mostaghel, M. A., 88M/2330 Motekaitis, R. J., 88M/2362 Motiu, A., 88M/3124 Motooka, J. M., 88M/0921 Motov, A. P., 88M/0641 Motovilov, P. I., 88M/5896 Mottana, A., 88M/1837 Mottl, M. J., 88M/0796 Motyka, A., 88M/3008 Mount, V. S., 88M/4791 Mountrakis, D. M., 88M/1164 Moura, E. Casal, 88M/5017 Moura, M. L., 88M/3437 Mouraouah, A. El, 88M/2834, 6163 Mouraz-Miranda, A., 88M/0800 Moyer, T. C., 88M/1354 Moyes, J., 88M/0002 Mozgova, N., 88M/6444 Mozgova, N. N., 88M/4319, 4320 Mruma, A. H., 88M/1482 Mu, X., 88M/4662 Mu Zhiguo, , 88M/1627 Mucci, A., 88M/0499, 2329 Muchena, F. N., 88M/1763 Mucke, A., 88M/3544 Mudford, B., 88M/2699 Mudie, P. J., 88M/2670, 2956 Muecke, G. K., 88M/3244 Muehlenbachs, D., 88M/0654 Muehlenbachs, K., 88M/2493, Mueller, P. A., 88M/3974, 5620 Mueller, W., 88M/2998, 4512 Muggeridge, M. T., 88M/4352 Muhe, R., 88M/2909 Muhle, K., 88M/2350 Muhling, M., 88M/3105 Muir, I. J., 88M/5945 Mukasa, S. B., 88M/2255, 3219 Mukherjee, A., 88M/0959 Mukherji, S., 88M/1022 Mukhopadhyay, B., 88M/2858 Mukhopadhyay, K., 88M/6245 Mukhtarov, Yu. G., 88M/5038 Mulargia, F., 88M/4558 Muller, F., 88M/3711 Muller, G., 88M/3992, 4065, 5378, 5484, 6381 Muller, H. W., 88M/3411, 4798 Muller, I., 88M/5862 Muller, J., 88M/1435 Muller, J.-P., 88M/5032 Muller, P., 88M/4124 Muller, W. F., 88M/3474 Mullins, C. E., 88M/4993 Mullis, J., 88M/4679 Mulyadi, W., 88M/3555 Mumme, W. G., 88M/3501, 6083, 6096

Muneill, G. E., 88M/0569, 6425

Munguia Bracamontes, F., 88M/

Mundarino, J. A., 88M/3169

Mundy, D. J. C., 88M/6111

Mungall, J. E., 88M/3844

0838

Munha, J., 88M/2898 Munier-Lamy, C., 88M/2511 Munoz, J. L., 88M/1472, 4754 Munoz, M., 88M/0367, 0628 Munro, M. A. R., 88M/4884 Munyanyiwa, H., 88M/5752 Murad, E., 88M/0162 Murakami, N., 88M/2243 Murakami, T., 88M/0975, 3122, 3462 Murali, A. V., 88M/5617 Murase, T., 88M/3651 Murat, M., 88M/0137 Muravitskaya, G. N., 88M/5427 Murchison, D. G., 88M/2408 Murdoch, J. B., 88M/5127 Muresan, I., 88M/5198, 6331 Murname, R., 88M/0736 Murowchick, B. L., 88M/2623 Murowchick, J. B., 88M/2493 Murowchick, J. N., 88M/3760 Murphy, J. B., 88M/1352 Murphy, T. E., 88M/1684 Murphy, W. H., 88M/3731 Murphy, W. M., 88M/3806, 5376 Murray, C. G., 88M/2697, 5218 Murray, J. W., 88M/0505, 4111 Murthy, S. R., 88M/4388 Murthy, V. R., 88M/3973 Murti, G. S. R. Krishna, 88M/ 1776 Murti, K. S., 88M/4391 Murzin, V. V., 88M/2343, 2607 Mussallam, K., 88M/4613 Mussett, A. E., 88M/0008 Mustafaev, G. V., 88M/0726 Mutakyahwa, M. K. D., 88M/ 1421 Mutanen, T., 88M/1026 Myers, J. D., 88M/0738, 0739 Myers, S. A., 88M/6426 Myhra, S., 88M/6057 Mykytiuk, A. P., 88M/4949 Mysen, B. O., 88M/0101, 0447, 0471, 0476, 3717, 5383

Nabelek, P. I., 88M/0601, 1285, 2067 Nada, A., 88M/5860 Nadeau, P. H., 2581, 3350 88M/1716, Naeser, C. W., 88M/0361, 6276 Nagahara, H., 88M/3717, 4212 Nagao, K., 88M/0953 Nagaraja Rao, B. K., 88M/4384 Nagashima, A., 88M/4782 Nagata, T., 88M/0942 Nahon, D., 88M/0393 Naidja, A., 88M/3363 Naidu, R., 88M/0211, 0212 Naidu, S. D., 88M/2478 Naik, M. S., 88M/5251 Nair, A. R., 88M/5870 Nair, N. G. K., 88M/1548 Nakada, S., 88M/1696

Nakagawa, S., 88M/2142

Nakahara, V. K., 88M/3877 Nakahiro, Y., 88M/1859 Nakai, I., 88M/5089, 5146 Nakajima, Y., 88M/1713 Nakamura, E., 88M/4912 Nakamura, H., 88M/0241 Nakamura, K., 88M/1172, 1322 Nakamura, Y., 88M/2323, 5651, 4744 Nakanishi, J., 88M/4767 Nakayama, E., 88M/4108, 4934 Naldrett, A. J., 88M/0286, 1195, 3859 Naldrett, D. L., 88M/3869 Naldrett, S. N., 88M/3869 Nalivkina, E. B., 88M/3089 Namegabe, M. R., 88M/2229 Namsarayev, B. B., 88M/5707 Namslowska-Wilczynska. 88M/3584 Namyslowska-Wilczynska, 88M/0368 Nancarrow, P. H. A., 88M/ 3572, 6469 Nancollas, G. H., 88M/5442 Naney, M. T., 88M/0671 Nanzyo, M., 88M/0142 Napier, S. T., 88M/5317 Napijalo, M., 88M/6447 Nappi, G., 88M/4561 Naqri, S. M., 88M/0773, 6123 Narain, H., 88M/4383 Nardi, G., 88M/0409 Nardi, L. V. S., 88M/6224 Narnov, G. A., 88M/4265 Nartikoyev, V. D., 88M/2429 Nartova, N. V., 88M/4325 Naruse, H., 88M/0277 Nash, H., 88M/5857 Nasir, S., 88M/6243 Nassar, N., 88M/4327 Nassau, K., 88M/5489, 5495, 5513, 0578 Nasseef, A. O., 88M/1626 Natarajan, R., 88M/0773, 6050 Natterson, M. J., 88M/0916 Naughton, J. J., 88M/2949 Naumov, G. B., 88M/0057, 2342, 5923 Naumov, ٧. В., 88M/0691, 1272, 2854, 4310, 5253 Naumov, V. M., 88M/2135 Navada, S. V., 88M/5870 Navale, G. K. B., 88M/4658 Navarro, J. M., 88M/3254 Navidad, M., 88M/1607 Navrotsky, A., 88M/0273, 0478, 0538, 0540, 0545, 1784, 2071, 2074, 3661 Nawaz, R., 88M/3486, 4280, 4801, 6047 Nayak, S. S., 88M/6190 Naylor, D., 88M/3146 Nazarov, M. A., 88M/5709 Nazarov, V. N., 88M/0378 Naze, L., 88M/2065 Nazurkin, L. A., 88M/4131 Ndiaye, P. M., 88M/6310 Neal, C., 88M/5382, 6071

Neal, C. R., 88M/2756 Neathery, T. L., 88M/4515, 4516 Nechayev, Ye. A., 88M/0503 Needham, D. T., 88M/4403 Needham, H. D., 88M/5527, 5621 Needham, R. S., 88M/1926, 5177 Neelakantam, S., 88M/4395 Neger, T., 88M/3705 Negi, J. G., 88M/4573 Negretti, G., 88M/1609 Negro, A. Dal, 88M/5101 Neilson, M. V., 88M/4517 Neira, L. Rebollo, 88M/3378 Neiva, A. M. R., 88M/3813, 5555 Nekhorosheva, A. G., 88M/3089 Nekrasov, I. Ya., 88M/1069 Nekrasova, R. A., 88M/1069 Nekvasil, H., 88M/0480 Nelen, J. A., 88M/0245 Nelen, J. E., 88M/2655 Nell, J., 88M/0443 Nell, P. A. R., 88M/6135 Nelsen, T. A., 88M/4109 Nelson, C. S., 88M/6344 Nelson, D. E., 88M/3982 Nelson, D. M., 88M/1964 Nelson, D. O., 88M/2278, 4435 Nelson, D. R., 88M/3918 Nelson, J. B., 88M/2106 Nelson, K. L., 88M/2278, 4435, 5741 Nelson, S. E., 88M/1445 Nelson, S. W., 88M/2480 Nelson, W. E., 88M/2912 Nemec, D., 88M/2221, 4721, 6176 Nenakhov, V. M., 88M/1271 Nenasheva, S. N., 88M/4319 Neretnieks, I., 88M/5394 Neri, G., 88M/4559, 4560 Neri, R., 88M/5578 Nes, M. van, 88M/2812 Nesbitt, B. E., 88M/2493, 4755, 5291 Nesbitt, R. W., 88M/1375, 1392 Nesterov, A. R., 88M/1098, 6006 Nesterova, I. N., 88M/0532 Nesterovich, L. G., 88M/4312 Nettleton, W. D., 88M/3427, 3428 Neubert, W., 88M/3714 Neugebauer, H. J., 88M/4449 Neumann, E.-R., 88M/5625, 6150 Neumann, U., 88M/3544 Neves, L. J. P. F., 88M/0012, 1005, 1243, 1246 Neves, R., 88M/2935 Newberry, R., 88M/1870 Newberry, R. J., 88M/2146 Newbury, D., 88M/2664 Newbury, D. E., 88M/1093 Newhall, C. G., 88M/2921-2923 Newman, A. C. D., 88M/0090

Newman, I. G., 88M/5271 Newman, R. A., 88M/3323 Newman, S., 88M/3739 Newnham, L. A., 88M/2473 Newton, R. C., 88M/0547, 1122, 1492, 3660, 4692, 5481 Ney, P., 88M/3656, 3657, 3684 Ngok Bik, Nguen, 88M/1734 Nguen Ngok Bik, , 88M/1734 Nguyen, B. C., 88M/2393 Nguyen, T. K. T., 88M/1524 Ni, Y., 88M/2862 Nichol, I., 88M/0874, 0883. 0898, 0917 Nicholls, J., 88M/6143, 6144 Nichols, D. J., 88M/4238 Nichols, M. C., 88M/3301 Nicholson, K., 88M/1068, 4168, 6468 Nicholson, R. V., 88M/5424 Nickel, E. H., 88M/1087, 1100, 2661, 2667, 3501, 4343, 4345, 6065, 6088 Nicolas, A., 88M/2770 Nicoletti, M., 88M/0014, 0017, 0021, 1609 Nicolosi, J. A., 88M/3312, 3315 Nie, F., 88M/2170 Niedbalska, A., 88M/2030 Niedermayr, G., 88M/4817 Nielsen, A., 88M/2372 Nielsen, C. H., 88M/1093 Nielsen, D. L., 88M/3913 Nielsen, H., 88M/2156, 3891, 4136 Nielsen, R. L., 88M/3914, 5365 Nielsen, T. F. D., 88M/2805 Nielson, J. E., 88M/2917, 4417 Nielson, K. K., 88M/1674 Nielson-Pike, J. E., 88M/6098 Niemeyer, S., 88M/4216 Nieminen, P., 88M/3387 Nieto de Castro, C. A., 88M/ 3716 Nieva, D., 88M/1364 Nievergelt, P., 88M/2211 Niggli, E., 88M/3061 Nigmetzyanova, L. Z., 88M/ 0847 Nikitin, S. A., 88M/4953 Nikitina, L. P., 88M/4583 Nikolaenko, Yu. S., 88M/0377, 2235 Nikolayeva, O. V., 88M/0935 Nikolenko, N. V., 88M/0503 Nikolic, D., 88M/0305 Nikulina, I. A., 88M/1918 Nikol'skaya, L. V., 88M/1520 Nilson, D. G., 88M/1781 Nimmo, M., 88M/0818 Nio, S. D., 88M/6326 Nip, M., 88M/1419, 5889 Nirel, P., 88M/3286 Nironen, M., 88M/1903 Nisbet, E. G., 88M/0331, 4571 Nisca, D., 88M/0899 Nisca, D. H., 88M/4376 Nishi, J. M., 88M/0359, 1020 Nishida, N., 88M/0243

Nishida, S., 88M/2907 Nishida, Y., 88M/4580 Nishiizumi, K., 88M/0613 Nishikkawa, Y., 88M/4979 Nishimura, M., 88M/0856 Nishiyama, T., 88M/3104, 5033 Nisio, P., 88M/0801, 6400 Nissen, A. L., 88M/1600 Nissen, H.-U., 88M/1813 Nittrouer, C. A., 88M/2401 Niwas, J. M., 88M/1934 Nixon, G. T., 88M/0043, 4276 Nixon, P. H., 88M/1255, 1708, 2230, 2741, 2745, 2749, 2752, 2756, 2767, 2776, 2782 Nizhegorodova, I. V., 88M/2309 Njel, U.-O., 88M/1310 Njopwouo, D., 88M/0115 N'ni, J., 88M/1311 Noel, J., 88M/0823 Noel, M., 88M/4788 Noe-Nygaard, A., 88M/2888 Nokes, R., 88M/6146 Nokleberg, W. J., 88M/3911 Nolan, C., 88M/5191 Nolan, P. J., 88M/4865 Noller, J. S., 88M/4417, 6098 Nonnon, M., 88M/4332 Nooy, D. de, 88M/4747 Nord Jr, G: L., 88M/1540 Nordstrom, D. K., 88M/0507, 2014, 3826 Norem, D., 88M/1712 Norman, D. I., 88M/0746 Noronha, F., 88M/1880 Norrestam, R., 88M/3500 Norris, A. W., 88M/3002 Northrop, H. R., 88M/2581, 5003 Norton, D. L., 88M/3792 Norton, S. A., 88M/2371 Norton, S. J., 88M/3277, 3278 Noshkin, V. E., 88M/0794 Nosik, L. P., 88M/0732 Notarpietro, A., 88M/2212, 2214 Noto, P., 88M/2219 Notsu, K., 88M/0683, 0733, 5651 Nougier, J., 88M/0722 Novakovic, L., 88M/6447 Novelli, G., 88M/0170 Novgorodov, N. S., 88M/5713 Novgorodova, M. I., 88M/2853 Novikov, M. P., 88M/2056 Novitsky, I., 88M/0707 Novoselova, L. N., 88M/4661 Nowell, A. R. M., 88M/4666 Nowlan, G. A., 88M/0918 Nozaki, Y., 88M/4105 Nozik, Yu. Z., 88M/1820, 2048 Nriagu, J. O., 88M/1963 Nukui, A., 88M/3477 Nun, N., 88M/6492 Nunez, J. A. Medina, 88M/1877 Nunnari, G., 88M/4555 Nunziata, C., 88M/1546 Nuovo, G., 88M/2975

Nurmi, P. A., 88M/2817, 2819 Nusbaum, R., 88M/6141 Nusszer, A., 88M/3078, 3080 Nuti, S., 88M/2219 Nutman, A. P., 88M/0001, 1120, 2811, 3030, 3033, 4697 Nutt, T. H. C., 88M/0316, 0372 Nuutilainen, J., 88M/2202 Nxs, K., 88M/5801, 5802 Nyamapfene, K. W., 88M/5040 Nye, P. H., 88M/3373 Nyquist, L. E., 88M/4187, 4188 Nys, C., 88M/0190 Nysten; P., 88M/4323 Nystuen, J. P., 88M/4372 Nzenti, J. P., 88M/6408 Oades, J. M., 88M/2993

Oakes, B. W., 88M/0878 Oates, C. J., 88M/0875 Obellianne, A., 88M/2152 Oberhansli, R., 88M/2349, 3067 Oberlin, A., 88M/4663 Oberti, R., 88M/5101 O'Brien, B. J., 88M/5058 O'Brien, C., 88M/2689 O'Brien, D. K., 88M/2728 O'Brien, G. W., 88M/2321 O'Brien, P. A., 88M/3959 O'Brien, S. J., 88M/3178 Obyskalov, A. K., 88M/3093 Ocampo, R., 88M/2446 Ocana, M., 88M/5123 O'Connor, M. J., 88M/1685 O'Connor, P. J., 88M/3206, 5191 O'Day, P. A., 88M/5763 Oddone, M., 88M/0710 Odom, A. L., 88M/4530 Oelkers, E. H., 88M/3680 Oen, I. S., 88M/2682 Oertel, G., 88M/1159 Oeschger, H., 88M/5523, 5862 Oestrike, R., 88M/0273, 1784 Offermann, P., 88M/1959 Officer, C. B., 88M/5701 Offler, R., 88M/3908, 5596 Ogata, K., 88M/5122 Ogawa, M., 88M/5305 Ogino, T., 88M/2053 Ogorelec, B., 88M/4093 O'Neil, J. R., 88M/5760 Ogorodnikova, L. P., 88M/2063 O'Neill, H. St. C., 88M/0445 Ogorodova, L. P., 88M/0457 Oh, J. H., 88M/4663 O'Hara, M. J., 88M/1468 O'Hara, S. C. M., 88M/4128 Ohashi, H., 88M/1797, 3451, 5103 Ohde, S., 88M/2645 Ohikere, C., 88M/3613 Ohlsson, L. G., 88M/3569 Ohmoto, H., 88M/0796 Ohnenstetter, D., 88M/4269, 4305 Ohnenstetter, M., 88M/0288 Ohnstad, M., 88M/5894

Ohsuna, T., 88M/2606 Ohtani, E., 88M/3648, 5639 Ojakangas, R. W., 88M/2958 Ojeda, J. M., 88M/2142 Ojo, O. M., 88M/4174 Okada, A., 88M/0939, 0940 Okada, H., 88M/2293, 3415 Okada, K., 88M/1761 Okamoto, M. Y., 88M/0860 Okamura, F. P., 88M/0250 Okamura, S., 88M/0681 Okay, A. I., 88M/0996 Okazaki, S., 88M/4934 Okrusch, M., 88M/0369, 4720 4737 Okubo, S., 88M/5545 Okuyama, O., 88M/2083 Olade, M. A., 88M/2466 Old, R. A., 88M/2964 Oldershaw, A. E., 88M/3997 Oldfield, F., 88M/4865, 5318 Olearczyk, R. E., 88M/5989 O'Leary, D. W., 88M/2339 O'Leary, M. J., 88M/1049 3814 Oleksow, R., 88M/5814 Olerud, S., 88M/6055 Olesch, M., 88M/4737 Olesen, N. O., 88M/4374 Oliveira, J. M. Santos, 88M 5925 Oliver, M. A., 88M/0201, 0202 Oliver, N., 88M/3107 Oliver, R., 88M/1364, 2227 Oliver, R. L., 88M/3110 Olivera-Pastor, P., 88M/3369 Oliveri, F., 88M/0710 Olkhovaya, E. A., 88M/4313 Ollier, C. D., 88M/1635 Ollila, J. T., 88M/2160, 2593 2610, 2845 Ollila, P. W., 88M/6015 Olmedo, F., 88M/0398 Olorunfemi, B. N., 88M/4028 Olsen, P. E., 88M/0966 Olson, P., 88M/1373 Olson, P. L., 88M/4413 Olsson, T., 88M/3826 Omaljev, V. T., 88M/2116 Omar, G., 88M/1653 Omar, G. I., 88M/0020 Omel'yanenko, B. I., 88M/0688 Omueti, J. A. I., 88M/4997

O'Neill, I., 88M/1061 O'Reilly, S. Y., 88M/1127 2751, 2761, 2777, 2808 3956, 3957 Ongley, J. S., 88M/0804 O'Nions, R. K., 88M/2115 4873, 5529, 5613 Ono, K., 88M/0733 Ono, T., 88M/5733 Onoratini, G., 88M/1586

1997, 5397

Onstott, T. C., 88M/3188 Onuma, N., 88M/2283

Dnuska, F. I., 88M/1689 Onyeagocha, A. C., 88M/4058 Domori, T., 88M/0497, 3905 Dosthuyzen, E. J., 88M/3256 Oppenheimer, D., 88M/4791 Oppermann, H., 88M/5536 Oppo, D. W., 88M/5832 Orajaka, I. P., 88M/3842 Orberger, B., 88M/3862 Orciuolo, D., 88M/4080 Orem, W. H., 88M/2451 Oremland, R. S., 88M/4165 Oreshkin, V. N., 88M/2181 Organov, N. I., 88M/4320 Organova, N. I., 88M/2557, 2559 Orgzall, I., 88M/1992, 4196 Orlandi, C., 88M/1759 Orlandi, P., 88M/3155, 3156,

6081 Orliukas, A., 88M/6444 Orlova, A. V., 88M/0718 Orlova, G. P., 88M/5427 Orman, Z., 88M/5006 Orsag, V., 88M/5864 Orsi, G., 88M/4552 Orsini, J. B., 88M/1163, 1238 Orsovai, I., 88M/0819 Ortega-Gutierrez, F., 88M/ 2737, 6142 Orth, C. J., 88M/2539

Orton, G., 88M/2895 Osadchiy, Ye. G., 88M/5979 Osanai, Y., 88M/3102, 4507 Osawa, T., 88M/1797, 3451 Osborne, M. D., 88M/3128 Oshima, O., 88M/0683 Osichkina, R. G., 88M/0491

Ortino, S., 88M/2378

Osika, R., 88M/1872 Osipov, V. I., 88M/1734 Osipova, G. A., 88M/0636 Oskarsson, N., 88M/4547, 5624 Osmond, J. K., 88M/2458 Osorgin, N. Yu., 88M/0552

Ossaka, J., 88M/1761 Ossenkopf, P., 88M/4806 Ostapenko, G. T., 88M/5388, 5457

Ostende, E. R. van den Hoek, 88M/6326 Osterroht, C., 88M/5808

Ostroumov, M. N., 88M/0581 Ostwald, J., 88M/1034, 2035, 2643

Othman, D. Ben, 88M/0482 Otsuka, N., 88M/1725, 1761 Otsuka, R., 88M/1748 Ott, P., 88M/1161 Ott, U., 88M/5960 Ott d'Estevou, P., 88M/1162 Otten, M. T., 88M/0988 Ottenburghs, R., 88M/3398

Ottesen, C., 88M/6382 Otton, J. K., 88M/0836 Ottonello, G., 88M/3723

Oudin, E., 88M/4027, 6063

Oudin, J. L., 88M/4143

Oudot, C., 88M/2385 Ouedraogo, A., 88M/6186 Ounchanum, P., 88M/2573 Ouzegane, K., 88M/5637 Ovchinnikov, L. N., 88M/3090, Ovehinnikov, N. O., 88M/2557 Ovejero, G., 88M/0341 Overstreet, W. C., 88M/0359, 1020 Owada, M., 88M/4507 Owe, M., 88M/4197 Owens, B. E., 88M/1232 Owens, D. A., 88M/1824 Owens, D. R., 88M/1054 Oxburgh, E. R., 88M/2115, 5529 Oza, P. M., 88M/3392

Ozawa, K., 88M/1323

Ozima, M., 88M/3850, 5729, 5822, 5834

Paar, W. H., 88M/1572, 2631 Paavola, J., 88M/1601 Pabalan, R. T., 88M/2023 Pablo Macia, J. G. de, 88M/ 6170 Paces, J. B., 88M/6044 Paces, T., 88M/3829, 4024 Pachadzhanov, D. N., 88M/ 0771, 5710 Packard, T. T., 88M/5776 Packer, T. W., 88M/1697, 2473 Pacquet, A., 88M/2152 Page, D. W., 88M/1771 Page, N. J., 88M/0296, 6024 Pagel, M., 88M/2145, 2449. 3245, 3888, 5605 Pagoaga, M. K., 88M/3496 Pahl, P. J., 88M/0129 Pain, C. F., 88M/0196 Pakhomovy, Ya. A., 88M/1085 Paktune, A. D., 88M/6214

Palmer, D. F., 88M/6216 Palmer, G. R., 88M/1070 Palmer, H. C., 88M/2871, 6269 Palmer, J. A., 88M/3547

Pallister, J. S., 88M/1387, 4896

Pal, D. K., 88M/4210, 5041

Palchen, W., 88M/2464, 4006 Palenzona, A., 88M/1037, 3158

Palivtsova, M., 88M/0931

Palme, H., 88M/0943, 2521

Palacz, Z., 88M/2824

Palmer, C., 88M/2497

Palmer, M. R., 88M/0792, 2338, 5599 Palmer, S. E., 88M/4157

Pal¹mova, L. G., 88M/4317 Palomba, M., 88M/2463 Palsin, I., 88M/0030 Paltchik, N. A., 88M/1092 Pamic, J. J., 88M/2690 Pamic, J., 88M/6242 Pana, D. I., 88M/4723 Panagos, A. G., 88M/1883 Panarello, H. O., 88M/5863

Panasiuk, M., 88M/2225

Pandey, O. P., 88M/4573 Pandya, V. P., 88M/3392 Pang, Y., 88M/5590 Pankau, H.-G., 88M/4648 Pankiewicz, G. S. A., 88M/ 5989 Pankina, R. G., 88M/0770

Panozzo, R., 88M/2730 Pant, N., 88M/1729 Pantano, J., 88M/6451 Panteleyev, A., 88M/2479 Papadopoulos, P., 88M/5440 Papaiacovou, P., 88M/3684

Papanikolaou, D. J., 88M/3803 Papatheodorou, G., 88M/3582 Papesch, W., 88M/2141 Papezik, V. S., 88M/2911, 6208

Papike, J. J., 88M/2130, 6025 Papillon, M.-C., 88M/6486 Papunen, H., 88M/0287

Paquette, J. -L., 88M/3055, 6389

Paradis, S., 88M/6210 Parafiniuk, J., 88M/4026 Paraskevopoulos, G. M., 88M/ 1383

Pardo, M. T., 88M/5039 Parello, F., 88M/2379 Pareschi, M. T., 88M/1301,

Paretzkin, B., 88M/1011, 3446,

Parfitt, R. L., 88M/5057, 5060, 5337

Paris, P., 88M/5456 Parisi, E., 88M/1419 Park, A. F., 88M/3047, 6106 Park, K. H., 88M/1327

Park, R. G., 88M/1703 Parker, D. F., 88M/4436 Parker, D. R., 88M/1711 Parker, F. J., 88M/1096

Parker, S. C., 88M/5449 Parks, G. A., 88M/2014, 3299, 5414

Parlanti, E., 88M/5883 Parnell, J., 88M/2424, 5913 Parodi, G. C., 88M/1003, 1576,

4819 Parot'kin, S. V., 88M/5352 Parr, R. G., 88M/6435 Parrish, R. R., 88M/3194-3196

Parrish, W., 88M/3322, 5067 Parry, W. T., 88M/0364, 0668 Parslow, G. R., 88M/0872 Parsons, B., 88M/4619

Parsons, I., 88M/1187, 3340, 4868, 4879, 5622, 6039, 6147 Parthasarathy, N., 88M/0086 Partida, E. Gonzalez, 88M/0838

Parzhin, S. N., 88M/4195 Pascal, F., 88M/6361 Pascal, M. L., 88M/3799 Pascual, C. Marcos, 88M/1507 Pasero, M., 88M/1832

Pashuk, M. G., 88M/4100 Pasieczna, A., 88M/4025 Pasqualotto, M., 88M/5849

Pasquare, G., 88M/1361, 1362

Passaglia, E., 88M/4283 Passchier, C. W., 88M/2725 Pasteels, P., 88M/1309 Pasteris, J. D., 88M/0610, 2779, 3334, 4415, 5539 Pastor, P. O., 88M/4988

Patane, G., 88M/4556 Patchett, P. J., 88M/0044, 2684, 6142, 6221 Patching, T. H., 88M/1946

Paton, R., 88M/5346 Patrick, R. A. D., 88M/5581 Patrina, I. B., 88M/0523 Patterson, C. C., 88M/3626

Patterson, H. H., 88M/3380 Patterson, J. H., 88M/5724 Pattison, D. R. M., 88M/1001

Pattison, E. F., 88M/0882 Pattrick, R. A. D., 88M/5149 Paul, A. K., 88M/6050 Paul, D. K., 88M/0723, 2240

Paul, M., 88M/0047 Paul, R. L., 88M/4947 Pauling, L., 88M/1782 Paull, C. K., 88M/2923

Pauly, H., 88M/2658 Pautot, G., 88M/1172, 4852 Pauwels, H., 88M/2375 Pavicic, J., 88M/3629

Pavlides, S. B., 88M/1164 Pavlishin, V. I., 88M/3452 Pavlova, G. A., 88M/5707

Pavlova, G. G., 88M/0621 Pavlova, M., 88M/0076 Pavlova, M. A., 88M/2429 Pavlova, Z. N., 88M/4315

Pavlovsky, A. B., 88M/2127, 2149

Pavone, D., 88M/0418 Pavshukov, V. V., 88M/4953 Pawlikowski, M., 88M/0543 Pawloski, G. A., 88M/0067 Pawluk, S., 88M/0502 Paz, C. Garcia, 88M/0206 Peacock, M. W., 88M/3188

Peacock, S. M., 88M/4682 Peacor, D. R., 88M/0139, 0279, 0281, 0453, 1089, 1096, 2612, 2637, 2659, 2664,

6082, 6090, 6092, 6373 Pearce, J. A., 88M/0675 Pearce, T. H., 88M/4276, 4277,

5614, 5999 Pearson, C. F., 88M/1331 Pearson, N. J., 88M/2070 Pearson, R., 88M/3820

Pearson, W. N., 88M/1894 Pearson Jr, F. J., 88M/3819 Peck, C. A., 88M/4316 Peck, J. A., 88M/0947 Peckett, A., 88M/1506

Pedersen, A. K., 88M/2888, 2889 Pedersen, J. L., 88M/2150

Pedersen, R. B., 88M/4874, 6232 Pedersen, S., 88M/1190

Pedley, H. M., 88M/1416 Pedroso Lima, L., 88M/2462

Pei, J., 88M/1518 Peinado, M., 88M/1607 Peirone, P., 88M/6145 Pekdeger, A., 88M/3830 Pelati, L. T., 88M/3635 Pelchat, J.-C., 88M/5738 Pelisson, P., 88M/4342 Pelissonnier, H., 88M/1871 Pelletier, B., 88M/4852 Pellitero, E., 88M/3214 Peloquin, S. A., 88M/1353 Pemberton, S. G., 88M/1064 Pena, J. A. de la, 88M/2972 Peng, L., 88M/1279 Peng, T.-H., 88M/5343 Peng, Z., 88M/1720, 1796 Penick Jr, D. A., 88M/6476, 6477 Pennisi, M., 88M/3917 Pennywell, P. A., 88M/3880 Pentinghaus, H., 88M/3737 Pepin, R. O., 88M/2534, 4228 Pe-Piper, G., 88M/0967, 3963 Pequignot, G., 88M/1477 Perazzoli, V., 88M/1362 Perchersky, D. M., 88M/1524 Perchiazzi, N., 88M/1795 Perchuk, L. L., 88M/1217 Percival, H. J., 88M/5044 Percival, J. A., 88M/4774 Perdok, W. G., 88M/1835, 6446 Perdrix, J. L., 88M/0879 Pere, P., 88M/6392 Pereira, A. J. S. C., 88M/ 1244-1246 Pereira, J., 88M/0225 Pereira, L. C. G., 88M/1245 Perel'man, A. I., 88M/0624 Perera, L. R. K., 88M/6413 Perez, S. Monterrubio, 88M/ 0342 Perez-Mato, J. M., 88M/0234 Perez-Pariente, J., 88M/3381 Perez-Rodriguez, J. L., 88M/ 3368 Perfit, M. R., 88M/1996, 3962 Perham, J. C., 88M/3781 Perissi, R., 88M/3714 Perkins, C., 88M/5277, 6252 Perkins, D., 88M/0430, 6420 Perkins, E. H., 88M/0431, 0433 Perkins, H. F., 88M/3433 Perkins, W. G., 88M/5212, 5282 Perlinger, J. A., 88M/5773 Permingeat, 88M/1887, F., 2624 Perna, G., 88M/0609 Pernicka, E., 88M/0958, 5994 Perrault, G., 88M/0867, 2577, 3964 Perroud, P., 88M/2639 Perruchot, A., 88M/5029 Perry, E. A., 88M/2295 Perry, F. V., 88M/5673 Perseil, E. A., 88M/2140, 4288 Pershin, S. V., 88M/0962 Persikov, E. S., 88M/5370 Person, A., 88M/0651 Persson, P.-O., 88M/4878

Pertlik, F., 88M/0275, 0278, 0534, 1825, 1826, 5140 Pertseva, A. P., 88M/2431 Pervov, V. A., 88M/5646 Pesonen, L. J., 88M/6457 Pesquera, A., 88M/0398 Petat, B., 88M/4550 Petayev, M. I., 88M/5979 Peter, J. M., 88M/0300 Peterec, D., 88M/0344 Peters, E. K., 88M/0991 Peters, S. G., 88M/5276 Peters, T., 88M/3808 Peters, Tj., 88M/2565, 2566 Petersen, A., 88M/3695 Petersen, J. S., 88M/1201, 1873 Petersen, L. R., 88M/0901 Petersen, N., 88M/1032, 1534, 4787 Petersen, O. V., 88M/2658 Petersilje, I. A., 88M/2429 Peterson, J. A., 88M/0920 Pethybridge, A. D., 88M/5438 Petiau, J., 88M/5080 Petit, J. P., 88M/2718 Petitjean, K., 88M/1828, 3162 Petrascheck, W. E., 88M/1885 Petrik, I., 88M/1453, 1619, 3938, 5119 Petrova, I. V., 88M/6087 Petrova, L. M., 88M/0847 Petrova, L. S., 88M/0292 Petrovic, J., 88M/0528 Petrucciani, C., 88M/0017, 1609 Petrukha, L. M., 88M/1889 Petrusenko, S., 88M/1480 Pets, L. I., 88M/2430 Peucat, J. J., 88M/1604, 4886, 5627 Peyronnet, P. de, 88M/0704 Pezdic, J., 88M/4093 Pezerat, H., 88M/0111, 1802, 1806 Pezzino, A., 88M/4056, 4717 Pfeifer, H.-R., 88M/3070, 3809 Pharaoh, T. C., 88M/4883 Phelps, L. B., 88M/0422 Phifer, C. C., 88M/5081 Philip, G. M., 88M/6309 Philippe, L., 88M/2375 Philippot, E., 88M/5443 Phillips, B. L., 88M/3453 Phillips, F. M., 88M/0087 Phillips, G. N., 88M/0317, 0320, 0321, 0647, 1486, 1891, 2177, 3547, 4747, 6412 Phillips, J. C., 88M/1780 Phillips, S. E., 88M/6072 Philp, R. P., 88M/2414, 4144 Philpotts, A. R., 88M/4543 Philpotts, J. A., 88M/2497, 2498 Photiades, A., 88M/6060 Piantone, P., 88M/3935, 4305 Piasecki, M. A. J., 88M/4358 Piboule, M., 88M/0464, 4886

Picard, C., 88M/3759 Piccardi, G., 88M/6238 Piccirillo, E. M., 88M/4570, Piche, M., 88M/4512 Pichavant, M., 88M/1223, 1993, 3676, 3677, 3883 Pichocki, C., 88M/2324 Pichon, R., 88M/5448 Pichon, X. Le, 88M/1172 Pickering, W. F., 88M/2038, 3981 Pickford, C. J., 88M/4956 Pickford, M., 88M/0597 Picot, P., 88M/3889, 6063 Pidgeon, R. T., 88M/4053 Piepgras, D. J., 88M/0822 Pierre, C., 88M/2640, 4018 Pierson, C. T., 88M/0836 Pietracaprina, A., 88M/0170 Piggott, D., 88M/3615 Pigott, J. D., 88M/4114 Pikija, M., 88M/6242 Pilati, T., 88M/3507 Pilecki, J., 88M/3165 Pillard, F., 88M/2624, 4342, 6063, 6086 Pillinger, C. T., 88M/3851, 4234, 5956, 3852, 5968, 5984 Pilot, J., 88M/0632, 4646 Pilote, P., 88M/4512 Pimentel-Klose, M. R., 88M/ 4066, 5839 Pin, C., 88M/0024, 0705, 1118, 3210, 3929, 6283 Pinarelli, L., 88M/2220 Pinchasov, A., 88M/2138 Pineau, F., 88M/2394 Pines, A., 88M/3691, 5121, 5127 Pinet, C., 88M/2855 Pinkerton, H., 88M/1304 Pinte, G., 88M/3926 Pinto, A. F. F., 88M/2348 Pinto, A. F. Ferreira, 88M/ 1451 Pinto, L. A., 88M/0857 Pinto, M. S., 88M/2210 Pintson, H., 88M/2269 Piovesana, F., 88M/5851 Piper, D. Z., 88M/0781, 2327 Pipino, G., 88M/1882 Pique, A., 88M/2585 Pirajno, F., 88M/3896, 6366, 6367 Pirazzoli, P. A., 88M/3242 Piret, P., 88M/1074, 6093 Piriou, B., 88M/1838, 5090 Pironon, J., 88M/2449, 3888 Pirrie, D., 88M/1434, 4589 Pisarnitskaya, T. F., 88M/2429 Piskin, O., 88M/2226 Pitcher, W. S., 88M/4447 Pitonak, P., 88M/6405 Pitzer, K. S., 88M/2023, 3663 Pivec, E., 88M/4292 Piven, P. I., 88M/2430

Plaksenko, A. N., 88M/261 4297, 5585 Plank, T., 88M/1287 Plant, J. A., 88M/0627, 0799 Plas, L. van der, 88M/2583 Plastino, A., 88M/3378 Plater, A. J., 88M/5765 Platevoet, B., 88M/4243 Platonov, A. N., 88M/2562 Platt, R. G., 88M/6182 Plaumann, S., 88M/6239 Plavsic, M., 88M/2018 Plee, D., 88M/0120, 3355 Plimer, I. R., 88M/0983, 1854 3520, 3556, 4444, 6009 Ploquin, A., 88M/1876 Plsko, E., 88M/3281 Pluger, W. L., 88M/0357, 0655 Pluijm, B. A. van der, 88M, 4696 Plummer, C. C., 88M/4510 Plummer, L. N., 88M/0541 Pluth, J. J., 88M/1839, 5093 Pobedimskaya, Ye. A., 88M/ Pocklington, R., 88M/2441 Pocovi, A., 88M/4284 Podosek, F. A., 88M/4226 Podporina, Ye. K., 88M/1076 Podvin, P., 88M/5451 Poeverlein, R., 88M/1573, 1574 Pognante, U., 88M/2213 Pognante, V., 88M/1475 Pogudina, M. A., 88M/6359 Pohl, D. C., 88M/5414 Pohl, J., 88M/5994 Pohlandt, C., 88M/1677 Poidevin, J. L., 88M/0024 Pokalyuk, V. V., 88M/3412 Polezhaeva, L. I., 88M/2614 Poling, G. W., 88M/2042 Pollack, H. N., 88M/4776, 6453 Pollack, J. B., 88M/0599, 0934 Pollard, D. D., 88M/6218 Pollard, P. J., 88M/3883 Polokhov, V. P., 88M/0289 Polya, D. A., 88M/6056 Polyakov, A. I., 88M/0718 Polyakov, A. S., 88M/2982 Polyakov, V. O., 88M/1094 4260, 4336 Polyakova, O. P., 88M/0289 Polyzonis, E., 88M/2465 Pompilio, M., 88M/6237 Ponader, H. B., 88M/3741 Ponce de Leon, M. Iglesias 88M/1605 Poncelet, G., 88M/0153 Ponter, C., 88M/5809 Poole, E. G., 88M/1414 Poore, C., 88M/6279 Pope, C. G., 88M/6048 Pope, L. A., 88M/0501 Poporadze, N. G., 88M/1490 Popov, V. A., 88M/1094 Popov, V. S., 88M/2235 Popova, V. I., 88M/1094 Popp, R. K., 88M/0501

Poppe, L. J., 88M/2339, 2923 Poppi, L., 88M/0112 Porcelli, D. R., 88M/5613 Porcu, R., 88M/2463 Poreda, R. J., 88M/5526 Poritskaya, L. G., 88M/0604 Pornuevo, J. B., 88M/1459 Poroshin, E. E., 88M/1030, 4298 Poroshin, V. D., 88M/5819 Porritt, P. M., 88M/0649, 5598 Portnov, A. M., 88M/3841 Portnyagin, A. L., 88M/5479 Porto Lopez, J. M., 88M/0148 Portugal, M. R., 88M/1380 Posey, H. H., 88M/5786 Posey-Dowty, J., 88M/0495 Pospula, W., 88M/0543 Post, J. E., 88M/0260, 1798 Posthuma, J., 88M/4137 Postl, W., 88M/2563 Postnikova, V. P., 88M/1097 Potapenko, Yu. Ya., 88M/1489 Potapov, E. E., 88M/1274 Potdevin, J.-L., 88M/0702, 1478 Poths, H., 88M/0948 Poths, J., 88M/5968 Pototskiy, V. V., 88M/0637 Pottier, L., 88M/0508 Pottlacher, G., 88M/3705 Potts, P. J., 88M/0723, 4184, 4943 Poty, B., 88M/2145, 2197, 2280, 2449, 5605 Pouba, Z., 88M/0337 Pouget, P., 88M/4455, 6393 Pouit, G., 88M/3601, 5235 Poullen, J.-F., 88M/1838, 6086 Povendra, P., 88M/2587, 4292 Powell, H. K., 88M/5336 Powell, M. A., 88M/2638 Powell, R., 88M/1497, 3105, 5364, 5386, 6017, 6413 Powell, T. G., 88M/2435 Power, S. G., 88M/5238 Pownceby, M. I., 88M/1997 Pozo, M., 88M/5570, 6327 Pozo Rodriguez, M., 88M/6064, 5018 Pozzo, A. L. Martin del, 88M/ 1365 Prahl, F. G., 88M/0857 Prame, W. K. B. N., 88M/1492 Prasad, A., 88M/2857 Prasad, A. K., 88M/6188 Prasad, R. A., 88M/0829 Prasolov, E. M., 88M/5711, 5712 Prati, F., 88M/1302 Predecki, P., 88M/4765 Predecki, P. K., 88M/3326 Preite, D., 88M/1579, 3157, 4820 Premo, W. R., 88M/4896

Premoli, C., 88M/5229

Prendergast, T., 88M/2689

Prentice, J. E., 88M/5296

Prescott, J. R., 88M/0031, Presnall, D. C., 88M/1210 Press, S., 88M/4299 Presti, A. A., 88M/4533 Pretorius, J. J., 88M/0374 Pretti, S., 88M/2463 Prewitt, C. T., 88M/1780. 3675, 1793, 3494, 4241. 5413, 6438 Prezbindowski, D. R., 88M/ 0512 Price, B. D., 88M/3298 Price, D. M., 88M/1638 Price, G. D., 88M/5100, 5449 Price, J. G., 88M/3970, 4436, 6278 Price, N. B., 88M/2297, 5730 Price, P. E., 88M/5786 Prichard, H. M., 88M/2633, 3624 Pride, D. E., 88M/5574 Priem, H. N. A., 88M/3212, 4612 Priem, J., 88M/5299 Prieto, M., 88M/5361, 5432 Principi, G., 88M/4611 Princivalle, F., 88M/3491 Pring, A., 88M/4314, 4345, 6070, 6097 Pringle, I. J., 88M/6255 Prinn, R. G., 88M/0964 Prinz, M., 88M/2533 Prior, D. B., 88M/6338 Prisbrey, K., 88M/2188 Prisyagina, N. I., 88M/5377 Prisyagina, N. L., 88M/3697 Privitera, E., 88M/4554 Priyomarsono, S., 88M/4509 Probst, J.-L., 88M/4088 Prochaska, W., 88M/0809 Prohic, E., 88M/3627 Prokhorov, K. V., 88M/3091 Prokof'yev, V. Yu., 88M/5253 Prokopchuk, V. P., 88M/5612 Proshko, V. Ya., 88M/3452 Proshlyakova, N. G., 88M/5714 Prospero, J., 88M/5691 Prosser, J. T., 88M/2925 Proust, D., 88M/0164 Provencher, R., 88M/5108, 5110 Prowse, W. G., 88M/2432 Prudnikov, E. D., 88M/4952 Prxqel, N.-O., 88M/6149 Pucci, A. E., 88M/1984 Puchelt, H., 88M/1309, 5609 Pucher, R., 88M/6239 Puchkova, T. V., 88M/2290 Pudykiewicz, J., 88M/0404 Puerta, C., 88M/6117 Puga, E., 88M/2207, 6118 Pugin, V. A., 88M/2233, 2669 Puhan, D., 88M/3700, 6410 Puig, A., 88M/1657 Pukhtel, I. S., 88M/1268 Pulvertaft, T. C. R., 88M/6378 Pupin, J.-P., 88M/0974, 6002 Purandara, B. K., 88M/4657

Purcell, V. L., 88M/2544 Purnachander, N., 88M/3409 Purnachandra Rao, V., 88M/ Purnachandra Rao, Y., 88M/ 0616 Purtscheller, E., 88M/4300 Purtscheller, F., 88M/5629 Purucker, M. E., 88M/2957 Purvis, O. W., 88M/1081 Pusch, R., 88M/1733 Pushkar, P., 88M/5783 Pushkarev, E. V., 88M/4479 Putilina, V. S., 88M/0504 Putis, M., 88M/1453 Putnis, A., 88M/0247, 0969 Puttmann, W., 88M/4153 Puziewicz, J., 88M/4262, 4478 Pye, K., 88M/0187, 2620, 4916 Pyle, D. M., 88M/3939 Pyne, J. F., 88M/5191

Qidwai, H. A., 88M/4653 Qin, J., 88M/5911 Qin, Z., 88M/3184 Qiu, J., 88M/3235, 3236, 4254, 4255 Qiu, N., 88M/2862 Qiu, R., 88M/0644 Qu, L., 88M/1430 Quan, S., 88M/0623 Quartieri, S., 88M/0267, 2624 Queirazza, G., 88M/5324 Quesney, M., 88M/5321 Qui, D.-T., 88M/5144 Quigly, T. M., 88M/4124 Quinif, Y., 88M/2151, 3873, 4016, 4020 Quinlan, G., 88M/2699, 3178 Quinn, J. G., 88M/0859 Quinn, O. P., 88M/5857 Quint, R., 88M/1082 Quintana, L. R., 88M/2539 Quintana, P., 88M/3732 Quintino, V., 88M/2974 Quirt, D., 88M/2334 Qureshi, R. H., 88M/0198

Raab, G. M., 88M/3618 Raade, G., 88M/2575, 4337 Raaphorst, J. G. van, 88M/ 3856 Raase, P., 88M/1121, 3097 Rachetti, A., 88M/3309 Rachlin, A. R., 88M/2623 Raczek, I., 88M/5662, 5663, 5671 Radaev, V. N., 88M/5709 Radain, A. A., 88M/1626 Radakrishna, B. P., 88M/3342 Radford, N. W., 88M/3294 Radhakrishnamurty, C., 88M/ 1542 Radke, C. J., 88M/4992 Radke, F., 88M/6085 Radke, M., 88M/4124 Radke, R., 88M/5888

Radway, J. C., 88M/3619 Raeside, R. P., 88M/0037, 2700 Rafalskii, R. P., 88M/3701 Rafal'skiy, R. P., 88M/3681, 3697, 5347, 5377 Rager, H., 88M/5086 Ragland, P. C., 88M/4522, 5661 Raheim, A., 88M/3986 Rahman, A. M. S., 88M/4489 Rai, H., 88M/2945 Raimbault, L., 88M/2833, 3927, 3930, 3931 Raiswell, R., 88M/2139 Rait, N., 88M/2497 Raith, M., 88M/1121, 3097, 4732 Raja, M. K. K., 88M/3098 Rajabali, G., 88M/5478 Rajagopalan, G., 88M/3229 Rajamani, V., 88M/0724 Rajendran, A., 88M/4103 Rajendran, N., 88M/4399 Rajner, V., 88M/5882 Rajnoha, J., 88M/3860 Raju, B. N. V., 88M/1920 Raju, G. K., 88M/1548 Raju, R. D., 88M/1920 Rajurkar, S. T., 88M/4384 Rakovskii, E. E., 88M/0769 Rakovskiy, E. Ye., 88M/5600 Raleigh, C. B., 88M/4791 Ram Mohan, S. V., 88M/4990 Ramirez, C. F., 88M/1370 Rama, 88M/4182 Ramachandra, H. M., 88M/4388 Ramakrishna, R. S., 88M/0913 Ramakrishnan, M., 88M/4386 Ramalingaswamy, G., 88M/4384 Ramam, P. K., 88M/4396 Ramanamurthy, M. V., 88M/ 0922 Ramboz, C., 88M/1876, 1993 Ramik, R. A., 88M/1089, 2623, 2659 Ramirez, A., 88M/5893 Rammalmair, D., 88M/2179 Rammensee, W., 88M/0477 Rampnoux, J. P., 88M/4509 Rampone, E., 88M/6285 Rampton, V. N., 88M/1868 Ramsden, A. R., 88M/5724 Ranalli, G., 88M/6212 Ranasinghe, A. P., 88M/2103 Ranchon, E., 88M/5144 Rancon, J.-P., 88M/1317 Randazzo, A. F., 88M/4672 Randle, K., 88M/4933 Ranganath, N., 88M/3550 Ranger, J., 88M/0190 Rangin, C., 88M/0775 Rank, D., 88M/5882 Rank, G., 88M/2464 Rankin, A. H., 88M/3523 Rankin, P. C., 88M/4041 Rantala, E., 88M/2818 Rantala, R. T., 88M/5692, 5936 Rao, A. S., 88M/4399

Rao, B. K. N., 88M/6190 Rao, B. K. Nagaraja, 88M/4384 Rao, C. Madhusudana, 88M/ 3409 Rao, C. N., 88M/4388 Rao, J., 88M/3799 Rao, K. S., 88M/4392 Rao, M. S., 88M/5022 Rao, N. V. N. Durgaprasada, 88M/2986 Rao, S. M., 88M/5870 Rao, T. S., 88M/4387 Rao, V. K., 88M/4394 Rao, V. Purnachandra, 88M/ 3409 Rao, Y. Purnachandra, 88M/ 0616 Rapult, J. F., 88M/1156 Rapela, C. W., 88M/4534 Rapolla, A., 88M/1546 Raposo, M. I. B., 88M/5681 Rapp, R. P., 88M/3769 Raschka, H., 88M/2179 Rashidchi, A., 88M/0149 Rasilainen, K., 88M/5901 Raskova, D., 88M/1480 Rasmussen, E., 88M/5625 Raspor, B., 88M/3629 Rass, I. T., 88M/2849 Rastelli, N., 88M/1475 Rastogi, R., 88M/4734 Ratajczak, T., 88M/0174 Ratcliffe, N. M., 88M/4599, 6423 Rath, R., 88M/3127, 3267 Rathore, J. S., 88M/1136 Ratschbacher, L., 88M/1159, Rattenbury, M. S., 88M/4749, 4750, 5224 Rauch, F., 88M/6004 Raudsepp, M., 88M/0252, 1799, 1829 Rauenzahn, K. A., 88M/4353 Rauert, W., 88M/5873 Raupach, D. C., 88M/5881 Raupach, M., 88M/0143 Rausell-Colom, J. A., 88M/ 0562 Rautenschlein, M., 88M/0684 Rautureau, M., 88M/0160 Ravindra Babu, B., 88M/4384 Ravindra Kumar, G. R., 88M/ 1492, 1548 Ray, K. K., 88M/2946 Ray, P. K., 88M/0635 Ray, S. L., 88M/1170 Raybchikov, I. D., 88M/3694 Raymond Jr, R., 88M/1977, 2405 Raynaud, S., 88M/3266 Raynoha, J., 88M/2840 Razdan, H., 88M/4033 Razumeyenko, M. V., 88M/0523 Rdzanek, K., 88M/3587 Read, P., 88M/3783 Read, P. G., 88M/2113 Readhead, M. L., 88M/1638 Reading, K. A. L., 88M/2478

Reagan, M. K., 88M/5660 Reardon, E. J., 88M/2022, 5424 Reasemberg, P., 88M/4791 Reay, A., 88M/2757 Rebello, A. De Luca, 88M/4078 Rebillon, F., 88M/5290 Rebollo Neira, L., 88M/3378 Reche, R., 88M/1938 Recy, J., 88M/3243 Reddy, B. J., 88M/6000 Reddy, G. R., 88M/5715 Reddy, T. A. K., 88M/1276, 6190 Redfern, S. A. T., 88M/0247, 3346 Redwood, S. D., 88M/5245 Reed, K. L., 88M/1519 Reed, M. H., 88M/2245 Reed Jr, G. W., 88M/4231 Reed, M. H., 88M/5398 Reed, S. J. B., 88M/5564 Reedman, A. J., 88M/1327, 2894, 2895 Reedman, J. H., 88M/2912 Reenen, D. D. van, 88M/3085, 5546 Rees, K. C. J. Van, 88M/3431 Reeves, K. D., 88M/2278 Reeves, R. D., 88M/2539 Regenberg, W., 88M/5852 Regnard, J .- R., 88M/0614 Reheis, M. C., 88M/5061 Rehm, K. E., 88M/0047 Rehtijarvi, P., 88M/3044 Reid, A. M., 88M/0941, 6292 Reid, D. L., 88M/0803, 1625, 4895 Reid, I., 88M/4629 Reid Jr, J. B., 88M/1293 Reidel, S. P., 88M/1356 Reimer, G. M., 88M/2261 Reimer, T. O., 88M/3897 Reinecke, T., 88M/4247 Reinertsen, D. L., 88M/6478 Reinhardt, J., 88M/3109 Reinhardt, M., 88M/3120 Reis, M. de L. P. Castro, 88M/4926 Reischmann, T., 88M/4889 Reisdorf, K., 88M/0535 Reissmann, R., 88M/4806 Reiter, M., 88M/1461, 4539 Rekha, G. K., 88M/4938 Reme, H., 88M/0960 Ren, D., 88M/3552 Ren, Q., 88M/1923 Ren, Y., 88M/5261 Renard, V., 88M/1172 Renault, J., 88M/0071 Renders, P. J., 88M/2077 Rengarajan, R., 88M/4081, 5816 Renmin, H., 88M/0380 Renner, R., 88M/2824, 4571 Renner, T., 88M/6363 Renon, H., 88M/0493 Rentzeperis, P. J., 88M/5094 Reshetnyakov, V. V., 88M/3412

Respaut, J.-P., 88M/4885 Restori, R., 88M/1818 Retayev. M. I., 88M/4227 Retief, E. A., 88M/4894 Rettig, S. J., 88M/5130 Reutel, C., 88M/3593 Reuter, A., 88M/1617, 3191, 4862 Reuter, K. B., 88M/5975 Reuther, C., 88M/4449 Reverdatto, V. V., 88M/3026 Reville, W. J., 88M/4637 Revnivtsev, V. I., 88M/4972 Rewitzer, C., 88M/4823 Rex, D. C., 88M/4868, 4895, 4900 Rey, J., 88M/6324 Reyes, E., 88M/3354 Reynard, B., 88M/6023 Reynolds, D., 88M/1727 Reynolds, J. H., 88M/2920 Reynolds, J. R., 88M/4601 Reynolds, P. H., 88M/3244 Reynolds, R. C., 88M/2471 Reynolds Jr, R. C., 88M/3413 Reyss, J. L., 88M/3227, 3982 Reznikov, N. V., 88M/2161 Rhein, M., 88M/4079 Rheingold, A. L., 88M/0245 Rhoades, J. D., 88M/3375 Rhoads, C. A., 88M/5898 Ribbe, P. H., 88M/0259 Ribe, N. M., 88M/2731, 5664 Ribeiro, M. L., 88M/4453, 4612 Riccobono, F., 88M/1249, 1861 Rice, A., 88M/2887 Rice, A. H. N., 88M/1128, 6379 Rice, C. M., 88M/1874 Richard, G., 88M/4927 Richards, B. D., 88M/4427 Richards, H. G., 88M/2159 Richards, J. R., 4867, 5597, 5603 88M/0033, Richardson, C. J., 88M/2159 Richardson, J. L., 88M/3434 Richardson, J. W., 88M/1839 Richardson, N., 88M/4865 Richardson, S. M., 88M/0599 Richardson, S. V., 88M/0392 Richardson Jr, J. W., 88M/5093 Riche, G., 88M/5744 Richet, P., 88M/3707 Richter, F. M., 88M/0814 Richter, P., 88M/4720, 6175 Richter, R., 88M/5525 Richter, W., 88M/2232, 3065 Rickard, R. S., 88M/3015 Ricman, G., 88M/4723 Ricou, L. E., 88M/2713 Ridgway, I. M., 88M/2297 Riding, R., 88M/4662 Ridley, J., 88M/3805 Ridley, W. F., 88M/5216 Riech, E., 88M/3159 Riedel, G. F., 88M/0835 Riedmuller, G., 88M/0016 Riehle, J. R., 88M/1350 Rieke, G. H., 88M/2514

Riesen, T., 88M/5862 Riessen, A. van, 88M/1044 Rietmeijer, F. J. M., 88N 2517, 6016 Riggs, S., 88M/1933 Rigor Jr. D. M., 88M/1331 Rijpkema, J. J. M., 88M/5429 Rijpstra, W. I. C., 88M/2450 Rimbach, H., 88M/5360 Rimsaite, J., 88M/2184 Rimstidt, J. D., 88M/039 1053, 2013, 2015, 5148 Rinaldi, A., 88M/0170 Rinaldi, R., 88M/2624, 2629 Rindstad, B., 88M/4375 Rinehart, C. D., 88M/6428 Ring, E. J., 88M/5940 Ring, R. M., 88M/5775 Ringrose-Voase, A. J., 88M Ringwood, A. E., 88M/3642 3644 Rioux, J.-P., 88M/6486 Ripley, E. M., 88M/0661 Rippon, P. W., 88M/5857 Ristori, G. G., 88M/0150 Ritamaki, L., 88M/3387 Ritchey, J. L., 88M/3560 Ritchie, A. I. M., 88M/1960 Ritchie, J. D., 88M/1137 Rivera, F. Guitian, 88M/0617 6058 Rives, V., 88M/1735 Riviere, J. C., 88M/6057 Rivoldini, S., 88M/2463 Robach, F., 88M/3555 Robb, L. J., 88M/5176 Robbins, M., 88M/4831, 6480 Robbins, T. W., 88M/0875 Roberge, W. G., 88M/1663 Roberson, C. E., 88M/0525 Robert, C., 88M/0221, 6234 Robert, D., 88M/0580, 5493 Robert, F., 88M/0951, 0952 4223 Robert, J. L., 88M/4269 Robert, M., 88M/0190 Robert, R. V. D., 88M/1678 Roberts, D., 88M/0004, 4698 6379 Roberts, D. E., 88M/0353, 517 Roberts, D. J., 88M/5382 Roberts, H. H., 88M/1767 Roberts, P. H., 88M/6454-6456 Roberts, R. G., 88M/0301 Roberts, W. C., 88M/2622 Roberts, W. L., 88M/2636 2654, 2664 Robertson, A. H. F., 88M/1883 Robertson, D. J., 88M/1545 Robertson, G. B., 88M/0031 Robertson, G. W., 88M/0849 Robertson, I. D. M., 88M/2470 Robertson, P. B., 88M/0968 1653 Robertson, S., 88M/1119, 6109 Robertson, S. M., 88M/5052

Riese, W. C., 88M/0919, 250d

Robie, R. A., 88M/2062, 2068, 5459 Robin, E., 88M/0955 Robin, P.-Y. F., 88M/5467 Robins, B., 88M/1194, 2815 Robins, R. G., 88M/2012 Robinson, B., 88M/5742 Robinson, D., 88M/5013, 5014, 6360 Robinson, G. W., 88M/2632 Robinson, J. J., 88M/5200 Robinson, M. A., 88M/4785 Robinson, N., 88M/5900 Robinson, P. D., 88M/1083 Robinson, P. T., 88M/2916 Robinson, S., 88M/5343, 6484 Rocci, G., 88M/1620 Rochelau, M., 88M/4512 Rocheleau, M., 88M/0593, 3600 Rochette, P., 88M/3140 Rock, N. M. S., 88M/0064, 0798, 2346, 2568, 2790, 3840, 3909, 4352, 4466 Rockwell, M. C., 88M/3515 Rodas Gonzalez, M., 88M/6026 Roddick, J. C., 88M/1664, 3196 Roded, R., 88M/2310 Rodeja, E. Garcia, 88M/0205 Roden, M. F., 88M/2736, 3019, 3973, 4422 Rodgers, K. A., 88M/1072, 6042, 6481 Rodier, M., 88M/5776 Rodionova, I. M., 88M/5426 Rodolfo, K. S., 88M/2253 Rodondi, G., 88M/1419 Rodrigues, A. M., 88M/2974 Rodriguez, L. A. Diaz, 88M/ 3581 Rodriguez, M. Pozo, 88M/6064 Rodriguez, W., 88M/2486 Rodriguez-Castellon, E., 88M/ 3369, 4988 Rodriguez-Garcia, A., 88M/ 3369 Rodriquez, M. Pozo, 88M/5018 Roe, A. L., 88M/3299 Roe, K. K., 88M/1683 Roeckner, E., 88M/5319 Roedder, E., 88M/1922, 4571 Roeder, P. L., 88M/1070 Roelandts, I., 88M/5937 Roering, C., 88M/1168 Roether, W., 88M/4079 Roex, A. P. le, 88M/1378, 3018, 4895, 6292 Roger, G., 88M/1860, 1880 Rogers, G., 88M/0685 Rogers, J. J. W., 88M/0806, 1308, 6191 Rogers, K. D., 88M/3273 Rogers, N., 88M/3016 W., 88M/0711, Rogers, N. 1126, 2275, 3017, 4184 Rogers, P. J., 88M/0891, 0915 Rogers, R. D., 88M/4594, 6148 Rolandi, G., 88M/1303 Rollet, M., 88M/1312 Rollin, K. E., 88M/3145, 6159

Rollinson, H. R., 88M/3050 Roma, D., 88M/3289 Roman, D., 88M/3907 Romanchev, B. P., 88M/3884 Romanenko, I. M., 88M/5480 Romani, L., 88M/2378 Romankevich, Ye. A., 88M/ 4034 Romano, R., 88M/4553, 4555, 4887 Romanov, V. L., 88M/5714 Romanova, M. A., 88M/4501 Romanyuk, Yu. K., 88M/5713 Rombouts, L., 88M/1256 Romero, E. Garcia, 88M/6026 Romero, R., 88M/5030 Romero Franco, R., 88M/0206 Romero, V. H., 88M/1365 Rona, P. A., 88M/3524, 4109, 5569 Ronca, L. B., 88M/0935 Ronday, F., 88M/4082 Ronen, D., 88M/2310 Ronk, A., 88M/0495 Ronkova, V. P., 88M/2384 Roobol, M. J., 88M/0912 Roobool, M. J., 88M/4606 Roonwal, G. S., 88M/0655, 2995 Roose, E., 88M/4094 Roques, G., 88M/0115 Roquin, C., 88M/0902 Rosch, H., 88M/2341 Roscoe, S. M., 88M/2873 Rose, W. I., 88M/2245, 2509, 2922 Rose Jr. W. I., 88M/2918, 2924 Rose-Hansen, J., 88M/2089 Rosello, C. Sapalski, 88M/6472 Rosemeyer, T., 88M/4835 Rosen, E., 88M/5408 Rosen, M. R., 88M/4039 Rosen, O. M., 88M/4739 Rosenbauer, R. J., 88M/2021 Rosenbaum, M. S., 88M/0051, 1667 Rosenberg, F., 88M/1938 Rosenberg, P. E., 88M/0557, 1714, 3766 Rosenblum, S., 88M/0359, 1020 Rosener, P., 88M/4091 Rosenhauer, M., 88M/3641, 4414 Rosenthal, E., 88M/2310 Roser, B. P., 88M/5725 Rosi, M., 88M/4604 Rosing, M., 88M/3033 Rosler, H.-J., 88M/0632, 4646, 5536, 5920 G. Rosmalen, van, 88M/5429, 5430 Ross, C. A. M., 88M/5108 Ross, F. K., 88M/1794 Ross, G. J., 88M/0222 Ross, J. D., 88M/3820 Ross, J. V., 88M/2047

Ross, M., 88M/6014

Ross, N. L., 88M/0545, 2074

Ross II, C. R., 88M/5102

Rossetti, P., 88M/1381 Rossi, G., 88M/5101 Rossi, P., 88M/1226, 3904 3934, 4472 Rossi, P. L., 88M/2896 Rossi de Toselli, J. N., 88M/ 4534 Rossman, G. R., 88M/0244, 0969, 0971, 2597, 5515, 6004 Rossovskiy, L. N., 88M/5552 Rossy, M., 88M/1239 Rota, J. C., 88M/2481 Rotella, F. J., 88M/0244 Rothery, D. A., 88M/1371, 1384 Rouchy, J.-M., 88M/2640, 4642, 4643 Rouer, O., 88M/6305 Rouse, J. D., 88M/5503 Rouse, R. C., 88M/0281, 1089, 2664, 6082 Rousset, D., 88M/4576 Routhier, P., 88M/3857 Roux, L., 88M/6393 Rouzaud, J. N., 88M/4663 Rovira, J. M. Virgos, 88M/ 1507 Rowbotham, G., 88M/2952 Rowe, G., 88M/4601 Rowell, D. L., 88M/5440 Rowland, S. K., 88M/1333 Rowley, E. B., 88M/4832 Rowley, P. D., 88M/4511 Roy, A., 88M/0807 Roy, J., 88M/6054 Roy Krouse, H., 88M/1976 Roy, P., 88M/0635 Roy, R., 88M/2069, 3744, 5329, 5469 Roy, R. F., 88M/3843 Roy, S., 88M/2572, 4296, 6053 Royer, J.-J., 88M/2347 Rozanski, K., 88M/5807, 5878 Rozhdestvenskaya, I. V., 88M/ 2559, 4348 Rozkowska, A., 88M/5702 Rozsa, P., 88M/1305 Rubbo, M., 88M/5431 Rubie, D. C., 88M/1994, 2060 Rubin, A. E., 88M/0949, 2531, 4217, 5973 Rubin, J. N., 88M/3970 Rubin, M., 88M/1341, 1656 Ru Chen Wang, , 88M/4289 Ruck, R., 88M/5134, 5135 Rucklidge, J. C., 88M/0658 Rudashevski, N. S., 88M/3900, 4770 Rudashevskii, N. S., 88M/1019, 1094 Rudashevskiy, N. S., 88M/0285 Ruddock, R. S., 88M/6256 Rude, P. D., 88M/0781, 5357 Rudnick, R. L., 88M/1115, 4904 Rudolph, J., 88M/5866 Rudowski, L., 88M/1463 Rugless, C. S., 88M/0873

Ruiz, J., 88M/0044. 0795. 5743, 6142, 6221 Ruiz-Amil, A., 88M/5068 Ruiz Kitcher, R. E., 88M/1365 Rukie, M., 88M/4660 Rule, A. C., 88M/0258, 3466, 6085 Rullkotter, J., 88M/4121 Rumble III, D., 88M/5345 Rumjantseva, N. A., 88M/1734 Rumyantseva, E. V., 88M/1098 Rundqvist, N. D., 88M/1224 Runnells, D. R., 88M/1961 Ruokolainen, R. B., 88M/4316 Ruostesuo, P., 88M/0797 Rupasinghe, M. S., 88M/2315 Ruperez, J. Locutura, 88M/ 3580 88M/3089, Rusanov, M. S., 3090 Rusinov, V. L., 88M/3091, 4686 Rusinova, O. V., 88M/4686 Rusmore, M. E., 88M/4409 Russ, J. C., 88M/3325, 3326 Russell, C. T., 88M/5951 Russell, C. Winston, 88M/4530 Russell, D. W., 88M/4177 Russell, G. S., 88M/4530 Russell, J. D., 88M/1717, 5035 Russell, J. K., 88M/4277, 6144 Russell, M. J., 88M/0366 Russell, M. R., 88M/5553 Russell, P. J., 88M/5207 Russo, D., 88M/0824 Rust, R. H., 88M/1751 Rust, S. A., 88M/1560, 1566 Ruth, E., 88M/2445 Rutherford, G. K., 88M/1737 Rutland, R. W. R., 88M/5301 Rutsek, J., 88M/4292 Rutter, E. H., 88M/1985, 6465 Rutter, M. J., 88M/0714, 2836, 3643 Ruzicka, V., 88M/1893, 5172 Ryabchikov, I. D., 88M/1272, 5427, 5642 Ryabeva, E. G., 88M/4319, 4320 88M/0620. Ryabova, Τ. ٧., Ryan, A. B., 88M/1120 Ryan, B. D., 88M/0656 Ryan, D. E., 88M/0913, 5967 Ryan, J. G., 88M/0696, 3915 Ryan, M. J., 88M/5126 Ryan, M. P., 88M/1220, 3121 Ryan, N. J., 88M/5898 Ryan, P. D., 88M/0063 Ryan, W. B. F., 88M/3179 Rybach, L., 88M/1911, 3148 Ryback, G., 88M/1568, 4801 Ryback, R., 88M/6078 Rybicka, E. H., 88M/3372 Ryden, J. C., 88M/0134, 0199 Rydzewski, A., 88M/3539 Rye, R. O., 88M/0834 Ryerson, F. J., 88M/3649, 3769 Ryka, W., 88M/1940 Rymon-Lipinski, T., 88M/5458

Rymyantseva, N. A., 88M/4793 Ryon, R. W., 88M/3301 Ryzhenko, B. N., 88M/3694, 5387, 5457

Saager, R., 88M/0311, 3898 Saastamoinen, J., 88M/3044 Saavedra, J., 88M/3214, 4534 Saavedra Alonso, J., 88M/0904 Sabat, F., 88M/2722 Sabate, P., 88M/1463 Sabatini, G., 88M/1249, 1861 Sabau, G., 88M/4723 Sabelli, C., 88M/1059, 1086, 1099, 1842, 3495, 3505, 5128, 5146 Sabine, P. A., 88M/4837 Sabourdy, G., 88M/6161, 6165 Sabourin, L., 88M/3964 Saburi, H., 88M/1859 Sacca, C., 88M/4309 Sacchi, R., 88M/4610 Sacco, A., 88M/3745 Sachanbinski, M., 88M/2105 Sack, R. O., 88M/1049, 3755, 3814 Sadigov, A. M., 88M/0769 Sadiq, M., 88M/5767 Sadura, S., 88M/1932 Safa, P., 88M/1907 Safroskin, V. Yu., 88M/3136 Sage, L., 88M/5895 Sage, R. P., 88M/1648 Sager, S. L., 88M/0760 Sagiroglu, A., 88M/3589 Saha, A. K., 88M/1170, 3230 Sahoo, R. K., 88M/1015, 6050 Saich, D. A., 88M/1566 Said, S. B. B. G. Al, 88M/5857 Saigal, N., 88M/4397 Saigusa, M., 88M/3435 Saikkonen, R., 88M/2564, 2590 Saikumar, V., 88M/5974 Saito, Y., 88M/4261 Sakai, C., 88M/2128 Sakai, H., 88M/1999, 2398, 3905 Sakai, S., 88M/5929 Sakakibara, M., 88M/6007 Sakamaki, Y., 88M/2318 Sakamoto, C., 88M/5473 Sakamoto, T., 88M/4979 Sakamoto-Arnold, C. M., 88M/ 5843, 5846 Saklani, P. S., 88M/4402 Sakurai, K., 88M/1692 Sakuyama, M., 88M/1323, 1392 Salam, A., 88M/2948 Salamon, W., 88M/2608 Salazar, J. C., 88M/5864 Salazkin, A. N., 88M/5923 Saleeby, J. B., 88M/0034, 0749, 6220 Saleh, A., 88M/4327 Salemink, J., 88M/3804, 3805, 3807 Saliot, A., 88M/2440, 5884 Saliot, P., 88M/6234

Salisbury, M. H., 88M/3144 Salje, E., 88M/0247, 0248, 5065 Sallam, H. A., 88M/2540 Salmin, Yu. P., 88M/5552 Salpas, P. A., 88M/1292 Saltelli, A., 88M/1959 Samama, J.-C., 88M/2303 Samantaray, B. K., 88M/3736 Samchuk, A. I., 88M/0492 Samotoin, N. D., 88M/2657 Samovarov, Yu. V., 88M/3095 Samson, I. M., 88M/0366, 3525 Samson, S. D., 88M/3189 Samuelsson, L., 88M/3201 Sancar, M. S., 88M/3519 Sanchez, A. C., 88M/5012 Sanchez, A. Garcia, 88M/0904, 0905 Sanchez-Camazano, M., 88M/ 0116, 0151, 3393 Sanchez-Martin, M. J., 88M/ 0116, 0151, 3393 Sand, L. B., 88M/3745 Sandberg, W. A., 88M/0861 Sanders, I. S., 88M/6385 Sanders, J. G., 88M/4004 Sanders, J. V., 88M/2606 Sanderson, L. M., 88M/4457 Sandford, S. A., 88M/0956 Sandiford, M., 88M/3105, 5386, 6017, 6413 Sandiumenge, F., 88M/3762 Sandomirskaya, S. M., 88M/ 3861 Sandwell, D. T., 88M/3180 Sang, H., 88M/3235, 3236 Sangster, A. L., 88M/1927 Sanina, N. B., 88M/0895 Sanjuan, B., 88M/0494, 2010. 5764 Sanke Gowda, H., 88M/4938 Sanna, G., 88M/1937 Sano, Y., 88M/0734, 5651. 5683, 5834 Sansone, F. J., 88M/0860 Santacroce, R., 88M/3254 Santin, S. Fernandez, 88M/5366 Santos, F. J. Viera dos, 88M/ 3716 Santos Oliveira, J. M., 88M/ 5925 Santosh, M., 88M/1494 Santschi, P. H., 88M/4080 Santschi, P. J., 88M/6328 Santucci, A., 88M/1099 Sanz, E., 88M/0119 Sanz, J., 88M/5114 Sapalski Rosello, C., 88M/6472 Sapin, V. I., 88M/4265 Sapozhnikov, Yu. A., 88M/4102 Sappa, M., 88M/0168 Sarazin, G., 88M/2375 Sardarov Jr, S. S., 88M/4100 Sarikaya, M., 88M/3703 Sarkar, A., 88M/0723 Sarkar, S., 88M/4656, 6337 Sarkar, S. N., 88M/2167, 3230 Sarp, H., 88M/1833, 2549, 2639, 2665, 4345

Sarrot-Reynauld, J., 88M/5869 Sarvas. P., 88M/3130 Sarvothaman, H., 88M/2856 Sasaki, A., 88M/2191, 4341 Sasaki, S., 88M/3494 Sass, B. M., 88M/1714 Sassano, G. P., 88M/0593 Sassi, A., 88M/0759 Sathyanarayan, S., 88M/2313 Satir, M., 88M/4057 Sato, G., 88M/3498 Sato, K., 88M/1050, 2191, 2879 Sato, T., 88M/1902, 2879 Sato, Y., 88M/0439 Sauer, D. A., 88M/0579 Sauerbrei, J. A., 88M/0882 88M/0682, Saunders, A. D., 0685, 2249, 2251 Saunders, J., 88M/6432 Saunders, J. A., 88M/5293 Saupe, F., 88M/3862 Sauvaud, J. A., 88M/0960 Sauzay, G., 88M/5321 Savage, D., 88M/0489, 3673 Savascin, Y., 88M/4569 Savel'veva, N. I., 88M/5923 Saverikko, M., 88M/2890, 6383 Savic, P., 88M/4191 Savin, S. M., 88M/5572 Savin, W., 88M/4210 Savova, L., 88M/0030 Savrasov, D. I., 88M/3136 Savtchenko, L. G., 88M/3894 Sawada, H., 88M/5151 Sawada, K., 88M/2053 Sawaki, T., 88M/3261 Sawamoto, H., 88M/0425, 3648 Sawhney, K. J. S., 88M/4033 Sawka, W. N., 88M/4773, 5676 Sawkins, F. J., 88M/2190 Saxby, D., 88M/2495 Saxby, J. D., 88M/2436 Saxena, S. K., 88M/3839, 5359, 5460 Saxena, V. K., 88M/2904 Sayalero, M. L., 88M/3393 Sayers, C. M., 88M/4761 Sazonov, V. N., 88M/2343 Scambelluri, M., 88M/6399 Scambos, T. A., 88M/1288, 1809 Scamehorn, C. A., 88M/5081 Scandale, E., 88M/2598 Scandiffio, G., 88M/5851 Scarenzi, D., 88M/4886 Scarfe, C. M., 88M/0471, 2754, 2773, 2872, 4598 Scarratt, K., 88M/2107 Schaanning, M., 88M/5801, 5802 Schaber, G. G., 88M/4207 Schafer, A., 88M/0055 Schafer, B. M., 88M/3430 Schaffer, R. G., 88M/5888 Schaftingen, J. J. Van, 88M/ 0434 Schaltegger, U., 88M/1608

Schandl, E. S., 88M/2594 Scharbert, S., 88M/1614 Scheibe, L. F., 88M/6223 Scheible, A., 88M/0068 Schein, D. B., 88M/3877 Schell, W. R., 88M/0404, 1980 Schenck, P. A., 88M/0850 0851, 2422, 2450, 5889 5903, 5914 Schenk, C. J., 88M/6354 Schenk, D., 88M/3695 Schenk, V., 88M/6462 Schenker, F., 88M/2900, 3073 Schermerhorn, L. J. G., 88M 4452, 4612 Schiavon, N., 88M/4633 88M/0772 Schidlowski, M., 2313 Schiffman, P., 88M/6032 Schiffries, C. M., 88M/1009 6365 Schilling, J. G., 88M/5621 Schimmelmann, A., 88M/4958 Schindler, P. W., 88M/2036 Schiotte, L., 88M/1120, 3199 Schlag, C., 88M/3945 Schleistedt, M., 88M/6401 Schlemper, E. O., 88M/0274 3484 Schlesinger, M. E., 88M/5367 Schliestedt, M., 88M/0483 3802 Schlogl, H. U., 88M/6367 Schlorholtz, S., 88M/3317 Schlosser, P., 88M/4079 Schlutter, D. J., 88M/2190 Schmeling, H., 88M/1557 Schmetzer, K., 88M/0069, 0572, 0573, 0584, 2094, 2095, 3776, 3780, 5494, 5498, 5507, 6089 Schmid, H., 88M/1840, 5141 Schmid, S. M., 88M/2730 Schmidbauer, E., 88M/5138 5142, 6443 Schmidt, F., 88M/2586 Schmidt, F.-P., 88M/2155 Schmidt, F. H., 88M/2454 Schmidt, H.-L., 88M/2368 Schmidt, P. W., 88M/3142 Schmidt, R. L., 88M/0133 Schmidt, Th., 88M/3502 Schmidt-Mumm, A., 88M/5787 Schmidt-Thome, R., 88M/6222 Schmidt-Thomie, R., 88M/6225 Schmincke, H.-U., 88M/3216 4563, 6239 Schminke, H.-U., 88M/2951 Schmitt, R. A., 88M/4007 Schmitt-Strecker, S., 88M/0948 Schmitz, B., 88M/4012 Schneider, A., 88M/2096 Schneider, E., 88M/3691 Schneider, H., 88M/3743, 5458 Schneider, J. R., 88M/1818 Schneider, R. V., 88M/3843 Schnier, K., 88M/2430

Schnorrer-Kohler. G., 88M/ 2647, 4809, 4811, 4813, 4823 Schoberg, H., 88M/3202 Schoch, A. E., 88M/1261, 2555. 5638, 6411 Schock, H., 88M/0963 Schoft, J. W., 88M/1587 Scholl, E., 88M/3160 Schomaker, V., 88M/5098 Schonwandt, H. K., 88M/1873, 2150 Schoonen, M. A. A., 88M/5354 Schorin, H., 88M/2510, 5609 Schott, J., 88M/2003, 3815 Schotterer, U., 88M/5862 Schrader, E. L., 88M/3912 Schrader, H., 88M/2340 Schramke, J. A., 88M/5393 Schreiber, H. D., 88M/2536 Schreurs, A. W., 88M/1659 Schreurs, G., 88M/3111 Schreyer, W., 88M/0561, 1213, 2028, 3798, 4719 Schroll, E., 88M/2141 Schron, W., 88M/5536 Schropfer, L., 88M/3460, 3471 Schubert, G., 88M/1373 Schuberth, C. J., 88M/5307 Schubnel, H.-J., 88M/0094 Schuiling, R. D., 88M/0923, 3804, 3805, 3807 Schuler, Ch., 88M/6328 Schuler, G., 88M/4816 Schultz, A. J., 88M/0244 Schultz, L., 88M/5550 Schultz, P. H., 88M/0932 Schultz, P. K., 88M/0146. 0257, 1800 Schultz, R. B., 88M/4670 Schultz-Guttler, R., 88M/2565 Schultz-Guttler, R. A., 88M/ Schulz, K. J., 88M/2913 Schulze, D. G., 88M/0123 Schulze, D. J., 88M/2735, 2736, 2762 Schulze, W. A., 88M/3494 Schumacher, B. A., 88M/3433 Schumacher, J. C., 88M/0989, Schumann, R. R., 88M/4178 Schurch, M. L., 88M/2554 Schurmann, K., 88M/3729 Schuster, A., 88M/4065 Schuster, A. K., 88M/1570, 5378 Schuster, K. A., 88M/3992 Schutz, A., 88M/0153 Schutz, W., 88M/4456 Schwab, W. C., 88M/3910 88M/3411, Schwaighofer, B., 4798 H., 88M/2596, Schwander, 2660, 6432 Schwarcz, H. P., 88M/0049, 1970, 1971, 2271, 3139 Schwartzentruber, J., 88M/0493

Schwarz, D., 88M/0575, 2097

Schwarz, E. J., 88M/6207, 6459

Schwarzacher, W., 88M/2976. 2981, 3183 Schwarzenbach, D., 88M/1818 Schwarzenbach, R. P., 88M/ 0832 Schweickert, R. A., 88M/6220 Schweighardt, F. K., 88M/2417 Schwerdtner, W. M., 88M/3115 Schwerer, F. C., 88M/0942 Schwertmann, U., 88M/0162, 1033, 3757, 5358 Schwindinger, K. R., 88M/1295 Scian, A. N., 88M/0148 Scoates, R. F. J., 88M/2912 Scogings, A. J., 88M/1258 Scoon, R. N., 88M/2846 Scotchman, I. C., 88M/5015, 6319 Scott, A. C., 88M/1701, 2403 Scott, A. D., 88M/5002 Scott, A. G., 88M/5281 Scott, A. K., 88M/5281 Scott, K. M., 88M/1077, 2469, 5931 Scott, L., 88M/1075 Scott, P. W., 88M/1413 Scott-Smith, B. H., 88M/2733 Scott, S. D., 88M/0300, 2073, 2180, 5265, 5569 Scott. T. M., 88M/6351 Scotti, O., 88M/4791 Scotti, P., 88M/1577 Scovil, J. A., 88M/3255 Scribano, V., 88M/2837, 6172, 6173 Seal, M., 88M/3851, 3852 Sealy, J. C., 88M/1962 Sear, C. B., 88M/4535 Searl, A., 88M/6320 Searle, D. J., 88M/6340 Searle, M. P., 88M/4616 Sears, D. W. G., 88M/2519, 4213, 4214 Sebastian, M. T., 88M/5070 Seccombe, P. K., 88M/3908, Secher, K., 88M/0881 Seck, H. A., 88M/1123 Seddoh, K. F., 88M/3612 Sedivy, R. A., 88M/4156 Sedlock, R. L., 88M/6431 Sedykh, E. M., 88M/2309 Seeman, R., 88M/2642 Seemann, R., 88M/4818 Segalevich, S. F., 88M/2236 Segall, M. P., 88M/3416 Segev, A., 88M/0028 Sehlstedt, S., 88M/1135 Seidel, J.-L., 88M/6244 Seidemann, D. E., 88M/3250, 5559 Seifert, F., 88M/3028 Seifert, F. A., 88M/6014 Seifert, N., 88M/1623 Seifert, S., 88M/5397 Seifert, W. K., 88M/2416 Seiler, K.-P., 88M/5865 Seim, R., 88M/0715 Seitz, J. C., 88M/0610, 5539

Seitz, M. G., 88M/5311 Sekita, M., 88M/5103 Self. P. G., 88M/0146, 3753. 6072 Self. S., 88M/2922, 2923 Selinus, O. C., 88M/2460 Selivanovskava, T. V., 88M/ 4235 Selo. M., 88M/0692 Selverstone, J., 88M/1472 Semelin, B., 88M/1423, 1470 Semeniuk, V., 88M/6340 Semenov. G. A., 88M/3708 Semenov, M. Yu., 88M/0530 Semet, M. P., 88M/2929 Sen, A. K., 88M/5717 Sen, G., 88M/2758, 5677, 6205 Sen, S. K., 88M/4060, 5456, Sen, T. K., 88M/0922 Senaratne, A., 88M/2315, 5719 Senderov, E. E., 88M/3718 Senechal, M. L., 88M/1835 Senftle, J. T., 88M/5792 Sengupta, S., 88M/1171, 2946 Senin, V. G., 88M/5389, 5423 Senkayi, A. L., 88M/1442 Sepulveda, I. Garcia, 88M/5322 Serdobova, L. I., 88M/0620 Serebryanyy, B. L., 88M/2290 Serenko, V. P., 88M/1274 Sergeeva, E. I., 88M/2983, 5020 Serna, C. J., 88M/5123 Serrano, L., 88M/2142 Serratosa, J. M., 88M/5114 Serri, G., 88M/2252, 6300 Seru, V. B., 88M/0213 Servajean, G., 88M/0341 Setaka, N., 88M/0439, 5141 Setterfield, T. N., 88M/5286 Settle, D. M., 88M/3626 Sevast'yanova, Ye. S., 88M/ 0774 Sevely, J., 88M/5441 Severin, V. V., 88M/4298, 4953 Severinsky, I., 88M/5306 Sewell, D. K. B., 88M/4345 Seyfried Jr, W. E., 88M/0487, 3811 Squaldino, G., 88M/5431 Sha, P., 88M/5592 Sha, Q., 88M/1428 Shabtai, J., 88M/3359 Shaffner, T. J., 88M/4920 Shahabpour, J., 88M/3901 Shainberg, I., 88M/0155, 5011 Shakesby, R. A., 88M/2966 Shakola, V. A., 88M/4034, 5707 Shakur, A., 88M/4114 Shallo, M., 88M/2941 Shan, S., 88M/3126 Shankar, R., 88M/2311, 5715 Shanks III, W. C., 88M/0656, 0664 Shanmugam, G., 88M/4622 Shapar, V. N., 88M/4583 Shapkin, A. I., 88M/5352

Shapkina, Yu. S., 88M/4952 Sharaf, M., 88M/4567 Sharapov. V. N., 88M/2144. 3659 Sharif-Zade, V. B., 88M/5711 Sharkov, E. V., 88M/1268. 4440, 4567 Sharma, G. S., 88M/1920 Sharma, J. K. N., 88M/0424 Sharma, K. C., 88M/5461 Sharma, M., 88M/0773 Sharma, P., 88M/5732 Sharma, P. V., 88M/3131 Sharma, R. A., 88M/5405 Sharma, V. K., 88M/3692 Sharp, R. P., 88M/1340 Sharp, W. E., 88M/0409, 6303 Sharp, Z. D., 88M/1511, 5760 Sharpe, M. R., 88M/1195 Sharpton, V. L., 88M/4795 Shasha, S., 88M/2387 Shatkay, M., 88M/0768 Shatwell, D., 88M/5232 Shaub, B. M., 88M/4843 Shaw. D. M., 88M/2358 Shaw, H. F., 88M/0749 Shaw, H. R., 88M/1347 Shawe, D. R., 88M/0110 Shcheglov, A. D., 88M/0309 Shchekina, T. I., 88M/3740 Shcherbakov, V. P., 88M/1525 Shcherbakova, T. F., 88M/5754 Shcherbakova, V. V., 88M/1525 Shcherban, I. P., 88M/6358 Shchetochkin, V. N., Shearer, C. K., 88M/6025 Shelley, D., 88M/4588 Shelp, G. S., 88M/0883 Shelton, K. L., 88M/0645, 3554 Shen, Ch., 88M/2520 Shen, G. T., 88M/5946 Shen, J., 88M/0731 Shen, L., 88M/0455, 1720 Shen, P., 88M/2434, 5139 Shen, W., 88M/1786 Shen, X., 88M/1553 Sheng, G., 88M/0851, 2422. 4118, 5910 Sheng, T. F., 88M/3594 Shengelia, D. M., 88M/1490 Shengelia, M. D., 88M/1490, 3094 Shephard-Thorn, E. R., 88M/ 4631 Shepherd, A., 88M/0596 Shepherd, T. J., 88M/0367, 1904 Sheppard, C. M., 88M/5908 Sheppard, S. M. F., 88M/1223, 1277, 2793, 3245, 3948 Sheraton, J. W., 88M/4510 Shergold, J. H., 88M/4040 Sheridan, R. E., 88M/4849 Sherman, D. M., 88M/4977 Sherriff, B. L., 88M/0252, 1694, 5085 Shershakov, B. I., 88M/0289 Shervais, J. W., 88M/1292. 4420, 4425, 5533

Sherwood, B. A., 88M/0760 Sheu, D.-D., 88M/0793, 4114 Shevchenko, A. Ya., 88M/5600 Shi, C. R., 88M/6004 Shi, H., 88M/2168 Shi, W., 88M/0085 Shi, X., 88M/5911 Shi, Y., 88M/4689 Shiba, M., 88M/6414 Shibata, K., 88M/1631, 1658, 2282 Shibue, Y., 88M/2546 Shieh, Y. N., 88M/0670, 5721 Shiel, R. S., 88M/5037 Shigley, J. E., 88M/0578, 2101, 5488, 5508 Shih, C.-Y., 88M/4187, 4188 Shikazono, N., 88M/0619, 2174, 2548, 4272, 4285 Shilin, N. L., 88M/0606 Shiller, A. M., 88M/4071, 4115 Shima, M., 88M/0940 Shima, Makato, 88M/0938 Shima, N., 88M/5131 Shimada, N., 88M/3566 Shimazaki, H., 88M/1050 Shimizu, K., 88M/0529, 3751 Shimizu, M., 88M/0619, 4285 Shimizu, N., 88M/1378 Shimizu, Y., 88M/2083 Shimmield, G. B., 88M/5730 Shimojima, H., 88M/5406 Shinakin, B. M., 88M/0463 Shinkarev, N. F., 88M/1224 Shinohara, H., 88M/6238 Shipp, R., 88M/2525, 5964 Shirahata, H., 88M/3951 Shiraishi, F., 88M/4954 Shirane, Y., 88M/2061 Shirey, S. B., 88M/0077, 3965 Shirozu, H., 88M/4980 Shishlov, V. A., 88M/4953 Shivanna, K., 88M/5870 Shlaifshtein, B. A., 88M/1267 Shlichta, P., 88M/6031 Shlyukova, Z. V., 88M/0102 Shmulovich, K. I., 88M/3693 Shoba, V. N., 88M/3419 Shoji, S., 88M/1753, 3435 Sholkovitz, E. R., 88M/1952, 1953, 3621 Short, S. A., 88M/5687 Shorten, G. G., 88M/5227 Shouchez, R. A., 88M/0762 Shrivastava, J. P., 88M/5928 Shrotri, J. J., 88M/2033 Shteinberg, A. S., 88M/5516 Shtyastny, M., 88M/0931 Shubin, N. H., 88M/0966 Shukla, B. D., 88M/5201 Shukla, M., 88M/0773 Shukolyukov, Yu. A., 88M/0694, 0930, 3192, 4220, 5778, 5948 Shulepova, A. N., 88M/3941 Shuman, M. S., 88M/4161, 4162 Shumilin, Ye. N., 88M/4102 Shvarov, Yu. V., 88M/2366 Shvartsman, S. I., 88M/2290 Shvyrev, G. G., 88M/4325

Siagal, N., 88M/4398 Siaglo, H., 88M/1743 Sial, A. N., 88M/5678-5680 Sibbald, R. R., 88M/2428 Sibbald, T. I. I., 88M/5171 Sibley, D. F., 88M/3765 Sicard, E., 88M/1478 Siddiqui, R. H., 88M/1864. 1865, 1921, 2947 Siddiquie, H. N., 88M/4729 Sideris, C., 88M/1914, 2224 Sidheswaran, P., 88M/4990 Sidhu, P. S., 88M/5418 Sidorenko, G. A., 88M/1097 Sieber, N. H., 88M/5161 Sieber, N. H. W., 88M/1091 Siedlecka, A., 88M/4372 Siegel, B. Z., 88M/2262 Siegel, D. I., 88M/5874 Siegel, S. M., 88M/2262 Siegenthaler, R., 88M/4873 Siegenthaler, U., 88M/5862 Siemes, H., 88M/0513 Siever, R., 88M/2009 Siffert, B., 88M/3363 Sigalas, I., 88M/0564 Sigmarsson, O., 88M/3211 Siivola, J., 88M/1042 Sikder, A. P., 88M/0527 Sikora, W. S., 88M/0159, 0192, 0193, 3400 Sikorsky, R., 88M/3116 Sillitoe, R. H., 88M/5231 Sills, J. D., 88M/1118 Siloniz, I. de, 88M/5570 Silva, B. M., 88M/3423 Silva, M. T. Barral, 88M/6058 Silverberg, N., 88M/2329 Simakov, K. V., 88M/4035 Simantov, J., 88M/2224, 2942 Simigian, S., 88M/0059, 1043 Simmons, E. C., 88M/2277 Simmons, E. H., 88M/1787 Simmons, S. F., 88M/2190 Simmons, W. B., 88M/2659 Simms, P. K., 88M/5239 Simon, N. S., 88M/1979 Simoneau, P., 88M/4512 Simoneit, B. R. T., 88M/2411, 2440 Simonen, A., 88M/2652 Simonenko, L. A., 88M/0846 Simonot, M., 88M/5875 Simonova, L. I., 88M/0732 Simov, S. D., 88M/5168 Simpara, N. Th., 88M/3612 Simpson, B., 88M/4781, 5826 Simpson, H. J., 88M/5860 Simpson, J., 88M/2967 Simpson, J. D., 88M/5333 Simpson, P. R., 88M/0349, 5170 Sims, P. K., 88M/5241 Simsons, A., 88M/0924 Sinclair, A. J., 88M/0896 Sindeev, A. S., 88M/4567 Singer, A., 88M/0154, 1762, 3410 Singh, A. K., 88M/5201

Singh, B. R., 88M/0208 Singh, I. B., 88M/0772 Singh, K. K., 88M/4733 Singh, M. P., 88M/1425, 3349 Singh, R. M., 88M/1425 Singh, U., 88M/5048 Singh, V., 88M/0127 Sinha, A. K., 88M/6001 Sinha, M. N., 88M/6213 Sinkankas, J., 88M/4248 Sinninghe Damst, J. S., 88M/ 4121 Sinninghe Damste, J. S., 88M/ 2422, 2450 Sipiera, P. P., 88M/2757, 5967 Sipila, H., 88M/3321 Sirinawin, T., 88M/0914 Sirkis, A. L., 88M/0530 Siron, R., 88M/2426 Sisson, V. B., 88M/0991 Sitta, S., 88M/1579, 3157, 4820 Sittig, E., 88M/6330 Siu, K. W. M., 88M/0082 Sivell, W., 88M/6294 Sivell, W. J., 88M/5656, 6416 Sivoronov, A. A., 88M/2851 Sivtsov, A. V., 88M/1919, 3878, 4319, 4320 Siwiec, A., 88M/5007 Size, W. B., 88M/4521 Sizykh, Yu. I., 88M/4325 Skagius, K., 88M/5394 Skarie, R. L., 88M/3434 Skarpelis, N., 88M/4726 Skeen, C., 88M/2497 Skeffington, R. A., 88M/5382 Skei, J. M., 88M/5692, 5800 Skenderov, G., 88M/0030 Skeries, R., 88M/3534 Skinner, B. J., 88M/1852, 6365 Skinner, N. J., 88M/0382 Skiold, T., 88M/0005, 2685. 4875 Skippen, G., 88M/3022, 3793 Skippen, G. B., 88M/6021 Skjemstad, J. O., 88M/1771 Sklavounos, S., 88M/1000, 5094 Skogby, H., 88M/5470 Skornyakova, N. S., 88M/2181, Skounakis, S., 88M/1914 Skounakis, S. B., 88M/1057 Skounakis, St., 88M/2224 Skowronski, A., 88M/1888 Skuba, C., 88M/5639 Skublov, G. T., 88M/0640 Skwarzec, B., 88M/5694 Slabbert, M. J., 88M/2555 Slaby, E., 88M/3023 Slade, P. G., 88M/0145, 0146, 0257, 1800 Slavek, J., 88M/2038 Slavescu, A., 88M/5872 Sliter, W. V., 88M/3170 Sliwa, A., 88M/0326 Sliwa, A. S., 88M/1888 Sloot, H. A. van der, 88M/5825 Slutskiy, A. B., 88M/3645 Smaalen, S. van, 88M/0233

Smale, C. V., 88M/3572 Smale, D., 88M/4664 Small, L. F., 88M/0794 Smalley, P. C., 88M/2298, 398 Smallwood, S., 88M/1144 Smart, R., 88M/4495 Smee, B. W., 88M/1704 Smellie, J. A. T., 88M/1135 Smellie, J. L., 88M/0687, 5626 Smit, C. A., 88M/1168 Smit, H., 88M/2874 Smith, A. L., 88M/4606 Smith, A. R., 88M/3843 Smith, B. F. L., 88M/0200 0207 Smith, B. K., 88M/2071, 3450 4762 Smith, B. M., 88M/1535 Smith, B. W., 88M/1637 Smith, C. G., 88M/6137 Smith, C. L., 88M/0747 Smith, D. B., 88M/0892 Smith, D. G. W., 88M/1437 Smith, D. J., 88M/3773 Smith, D. K., 88M/0068, 1061 3276 Smith, D., 88M/2769, 6219 Smith, D. G. W., 88M/1671 1712 Smith, D. J., 88M/5072 Smith, D. K., 88M/4922 Smith, D. M., 88M/5602 Smith, I. E. M., 88M/6199 6258, 6265 Smith, J. N., 88M/1964 Smith, J. V., 88M/1259, 1808 1839, 2533, 2541, 2578 3485, 3488, 5093 Smith, K. A., 88M/0188 Smith, K. L., 88M/4274 Smith, L. M., 88M/0406 Smith, M., 88M/1150 Smith, M. R., 88M/2768 Smith, P., 88M/1932 Smith, P. E., 88M/1649 Smith, R. D. A., 88M/1154 Smith, R. E., 88M/0879, 0884 Smith, R. W., 88M/0746 Smith, S. M., 88M/2488 Smith, Sir Howard, 88M/4838 Smith, T. K., 88M/3319 Smithson, S. B., 88M/4797 Smoliar, B. B., 88M/3467 Smolin, P. P., 88M/3767 Smrcok, L., 88M/3756 Smykatz-Kloss, W., 88M/6330 Smyth, J. R., 88M/1025, 1809 3328, 3448, 6438 Smyth, R. C., 88M/6278 Snelling, A. A., 88M/246 4176 Snelling, N. J., 88M/3181 Snodgrass, W. F., 88M/2034 Snow, R. J., 88M/0885 Snowdon, L. R., 88M/2443 Snyder, D. B., 88M/6495 Snyder, W. S., 88M/1182 So, C.-S., 88M/0645, 3554

Soares, J., 88M/2462 Soba, D., 88M/6408 Sobecki, T. M., 88M/2644 Sobolev, A., 88M/5621 Sobolev, A. V., 88M/2135 Sobolev, N. V., 88M/2745 Sobolewicz, A., 88M/3165 Sobornov, D. P., 88M/5584 Socha, S. B., 88M/0416 Soeda, A., 88M/1631 Soeria-Atmadias, R., 88M/4509 Sofer, Z., 88M/4138 Sohrin, Y., 88M/4108 Sokolenko, E. A., 88M/3420 Sokolov, P. B., 88M/4249, 6006 Sokolova, G. V., 88M/1066, Sokolova, M. N., 88M/0107 Sokolova, N. T., 88M/2342 Sokolova, T. A., 88M/1779 Sokolova, T. N., 88M/1066, 4346 Sokolova, Ye. V., 88M/1792, 3508 Solans, X., 88M/3698, 3762 Soler, A., 88M/4318 Solie, D. N., 88M/2584 Soliman, M. M., 88M/1481, 2843 Solomin, G. A., 88M/5686 Solomon, M., 88M/0650, 1851, 2011, 5220, 5285 Solomon, S. C., 88M/1550 Solomons, M., 88M/4935, 4937 Solov'ev, S. G., 88M/5252 Solovova, I. P., 88M/1272 Solov'yeva, N. V., 88M/2199, 4036 Soman, K., 88M/1766, 2238 Somani, R. S., 88M/3392 Somasundar, K., 88M/4103 Somayajulu, B. L. K., 88M/ 0405, 3229, 4081, 5816 Sommerauer, J., 88M/1377 Sondag, F., 88M/4013, 4055 Sonet, J., 88M/4459 Song, Y., 88M/0455, 1720 Song, You Wang, 88M/4783 Soni, M. K., 88M/4385 Sonntag, C., 88M/5852, 5866 Sonobe, N., 88M/3395 Sonuparlak, B., 88M/3703 Sonyushkin, V. E., 88M/4739 Sood, N. K., 88M/4399 Soons, R., 88M/5727 Soper, N. J., 88M/4378 Sophiah, S., 88M/5825 Sorensen, H., 88M/1186, 2089, 2804, 4462 Sorensen, J., 88M/0763 Sorensen, S. S., 88M/1402 Sorenson, J. A., 88M/4960 Sorokin, A. P., 88M/5604 Sorokin, N. D., 88M/3738 Sorokina, S. L., 88M/5516 Sorokina, T. S., 88M/4166 Sosson, M., 88M/4852

Souchez, R., 88M/3847

Soula, J.-C., 88M/6393

Soulie, M., 88M/5867 Sousa, J. J. F., 88M/2456 Southard, R. J., 88M/5063 Southard, S. B., 88M/5063 Souther, J. G., 88M/6272 Southgate, P. N., 88M/4040 Southon, J. R., 88M/3982, 5732 Southren, T. C., 88M/4848 Southwick, D. L., 88M/3968 Soya, T., 88M/0733 Sozzi, M., 88M/2218 Spackman, W., 88M/2405, 4123, 5897, 5898 Sparks, B. D., 88M/2442 Sparks, R. S. J., 88M/1202, 1203, 1298, 2886, 3939 Sparrow, G. J., 88M/6096 Spasennykh, M. Yu., 88M/3885 Spaulding, K., 88M/0750 Spear, F. S., 88M/5344 Spears, D. A., 88M/2407, 5021 Speczik, S., 88M/0290, 2158 Speer, J. A., 88M/2876 Spence, G. D., 88M/4607 Spencer, K. J., 88M/3969 Spencer, M. J., 88M/4098 Spencer, R. J., 88M/3996, 4110, 5543 Spengler, S. R., 88M/6266 Spera, F. J., 88M/1221, 1300, 3009 Sperling, H., 88M/5197 Spettel, B., 88M/0943 Speyer, P. M., 88M/2007 Spicer, R. A., 88M/3170 Spiegelman, M., 88M/1376 Spier, T., 88M/5059 Spiering, B., 88M/4732 Spiess, R., 88M/4888 Spiker, E. C., 88M/0843 Spiridonov, E. M., 88M/6087 Spiro, B., 88M/4008 Spisiak, J., 88M/6405 Spivack, A. J., 88M/0792. 0821, 2338 Spjeldnaes, N., 88M/1132 Spooner, E. T. C., 88M/5547 Sporli, K. B., 88M/1330 Sprague, E. K., 88M/2420 Spry, P. G., 88M/4293 Spycher, N. F., 88M/5398 Srecec, I., 88M/5408 Srikantappa, 88M/1493, C., 1495, 4732 Srikantia, S. V., 88M/4401 Srivastava, R. A. K., 88M/1705 Srivastava, R. K., 88M/2239, 4500 Srivastava, S. K., 88M/1729 Srodon, J., 88M/2581 Srogi, L. A., 88M/5636 Staal, C. R. van, 88M/2268 Stabel, A., 88M/3957, 5625 Stacey, J. S., 88M/4896 Stackelberg, U. von, 88M/3518 Stadelamier, H. H., 88M/3325 Stadnicka, K., 88M/1831 Stahl, K., 88M/3485, 5118 Stahle, V., 88M/3069

Stalder, H. A., 88M/2617 Stalick, J. K., 88M/4923 Stallard, M., 88M/0590 Stallard, M. O., 88M/0084 Stalling, D. L., 88M/0406 Stamatakis, M. G., 88M/1057 Stamm, U., 88M/0232 Stancheva, E., 88M/2129 Standfuss, K., 88M/4823 Standfuss, L., 88M/4823 Stanger, G., 88M/6071 Stanley, C. J., 88M/1051, 3571, 4337, 6090, 6092 Stanley, C. R., 88M/0896 Stanley, D. J., 88M/2301 Stanley, G. J., 88M/6049 Stanton, R. L., 88M/3511, 5230 Stanzione, D., 88M/0824, 5486 Starczewski, M., 88M/0565 Starinsky, A., 88M/3228 Starkey, H. C., 88M/5000 Starkey, J., 88M/0059, 1043 Starkey, J. C., 88M/0110 Starkey, R., 88M/3152 Starkey, R. E., 88M/0109, 4805, 6467 Starkey, S. J., 88M/2662 St. Arnaud, R. J., 88M/3388 Starostin, V. I., 88M/0378 Stasi, F., 88M/2598 Statham, P. J., 88M/4101 Staunton, S., 88M/3373 Staunton, W. P., 88M/3298 Stavrov, O. D., 88M/6193 St. C. O'Neil, H., 88M/1997 Stea, R. R., 88M/2475 Stebbins, J. F., 88M/3445, 3691, 5121, 5127 Stecher, O., 88M/2810, 3965 Steck, A., 88M/3068 Stednick, J. D., 88M/0919, 2506 Steel, A. T., 88M/5095 Steele, G. B., 88M/5190, 5924 Steenfeld, A., 88M/0900 Steenfelt, A., 88M/5180 Stefanov, D., 88M/1764 Stefanova, M. T., 88M/1225 Stegnar, P., 88M/3629 Steiger, R. H., 88M/4869 Stein, C. L., 88M/5544 Stein, S., 88M/4853 Stein, V., 88M/5299 Stein, W. B., 88M/3275 Steinberg, M., 88M/0160 Steinberg, S., 88M/2445 Steinberg, S. M., 88M/2444 Steiner, L., 88M/2179 Steinhardt, P. J., 88M/3442 Steinitz, G., 88M/3228 Steinkamm, U., 88M/3159 Steinthorsson, S., 88M/3801 Steller, M., 88M/4647 Stendal, H., 88M/0901, 3895 Stenger, J.-F., 88M/3676 Stepanchikov, V. A., 88M/2516 Stepanova, N. A., 88M/3899 Stephens, C. J., 88M/6249 Stephens, W. E., 88M/2203

Stephenson, L. C., 88M/2436 Stephenson, M. J., 88M/0404 Stephenson, N. C. N., 88M/ Stephenson, P. J., 88M/6203 Stepisiewicz, M., 88M/1741 Stepkowska, E. T., 88M/1724, 3371, 5004 Stergiou, A. C., 88M/5094 Stern, C. R., 88M/6277 Stern, R. J., 88M/2953, 4889, 4897, 6179 Stern, T. A., 88M/4777 Stern, T. W., 88M/4915 Stern, W. B., 88M/2596 Sterner, S. M., 88M/5538, 5540 Sterte, J., 88M/3359 Stettner, G., 88M/6175 Steurer, W., 88M/0236 Steven, T. A., 88M/6277 Stevens, R. D., 88M/0039 Stevenson, D. J., 88M/4847 Stevenson, J. S., 88M/2594 Stevenson, R., 88M/3247 Stevenson, R. J., 88M/4206 Stevenson, R. K., 88M/2591, 2592 Steward, D. C., 88M/6022 Stewart, A., 88M/5997 Stewart, A. D., 88M/4362, 4363 Stewart, A. J., 88M/1174 Stewart, J. M., 88M/1011, 3446, 3496, 4286 Stewart, M. K., 88M/5826-5829, 5850 Stichler, W., 88M/5865, 5873 Stiehl, G., 88M/2350 Stiers, W., 88M/1538 Stigler, S. M., 88M/4859 Stille, P., 88M/0709, 3067 Stiller, M., 88M/2387 Stillman, C. J., 88M/6290 Stine, S., 88M/5343 Stith, D. A., 88M/5308, 5740 Stoch, L., 88M/3374, 5007, 5475 Stockhert, B., 88M/0015 Stockmal, G. S., 88M/2699, 3178 Stockton, C. M., 88M/0589, 2098, 5488 Stockton, R. A., 88M/3292 Stoddard, E. F., 88M/6140 Stoeppler, M., 88M/3630 Stoessell, R. K., 88M/3379 Stofan, E. R., 88M/4208 Stoffers, P., 88M/0357, 3410 Stoffler, D., 88M/0929 Stoffregen, R. E., 88M/1060 Stoiber, R. E., 88M/2883, 2927 Stoicovici, E., 88M/5198 Stojanova, V., 88M/1479 Stok, A., 88M/3391 Stokes, J. B., 88M/1345 Stolper, E., 88M/3739, 5373 Stolper, E. M., 88M/3652, 4221 Stolyarova, T. A., 88M/5979 Stolz, A. J., 88M/1282, 5653

Sussieck-Fornefeld, C., 88M/

Stolz, J. F., 88M/1541 Stone, D., 88M/1972, 3116 Stone, D. B., 88M/3249, 4408 Stone, G. F., 88M/1781 Stone, J. O. H., 88M/5613 Stone, M., 88M/4270 Stone, P., 88M/4468, 5626. 6107, 6155, 6318 Stone, W. E., 88M/6270 Stone, W. E. E., 88M/0153 Stoneham, A. M., 88M/0226 Stoops, G., 88M/0210 Stoppani, F. S., 88M/1576, 4819 Storey, B. C., 88M/2994, 4511, 6135 Stormer Jr., J. C., 88M/5620 Storms, M. H., 88M/4959 Storr, M., 88M/4652 Storzer, D., 88M/0692 Stosch, H.-G., 88M/1123, 4562, 5749, 6398 Stout, J. D., 88M/5058 Stout, P. M., 88M/5843 Stout, S. A., 88M/4123 Stow, D. A. V., 88M/5698 Stowell, H. H., 88M/0991 Straaten, H. P. van, 88M/0336 Straaten, P. van, 88M/1932 Stracelsky, J., 88M/3724 Strachan, M. G., 88M/5915 Strachan, R. A., 88M/4357, 4704, 6384 Strand, U., 88M/4800 Strauss, K. W., 88M/6381 Strauss, S. W., 88M/0889 Strens, R. G. J., 88M/1002 Stribrny, B., 88M/5249 Strobel, P., 88M/5144 Strobl, H., 88M/0247 Stroes-Gascoyne, S., 88M/2034 Strong, C. P., 88M/2539 Strong, D. F., 88MM/2910 Strong, G. E., 88M/3572, 5810 Stronge, S. H., 88M/3771 Strother, S., 88M/1685 Stryuk, V. L., 88M/5806 Stuart-Smith, P. G., 88M/1926, Stucki, J. W., 88M/2075, 5001 Stuckless, J. S., 88M/2285 Studemeister, P. A., 88M/0304, 3510 Stueber, A. M., 88M/5783 Stuiver, M., 88M/2454, 5343 Stukas, V. J., 88M/4183 Stump, C., 88M/2454 Stump, E., 88M/2866, 6345 Stumpel, G., 88M/5096 Stumpfl, E. F., 88M/0809, 3509 Sturchio, N. C., 88M/0811 Sturgeon, R. E., 88M/1687 Sturm, M., 88M/6328 Sturman, B. D., 88M/2637 Stute, M., 88M/5866 Stutz, E., 88M/6187 Su, S., 88M/4240 Su, S.-C., 88M/1089, 1096. 1668, 2584

Su, Y., 88M/4502 Suarez, M., 88M/1657 Suarez V., F., 88M/4855 Subbanna, G. N., 88M/4396 Subbarao, K. V., 88M/2311, Subbotin, Ye. S., 88M/5712 Subrahmanyam, V., 88M/4729 Subramanian, V., 88M/2312 Such, K. P., 88M/5082 Sudharto, R. T., 88M/5593 Suen, C. J., 88M/4474 Sueno, S., 88M/2126, 4241 Suetake, S., 88M/4507 Suga, S., 88M/5929 Sugaki, A., 88M/3237, 4321 Sugden, D. E., 88M/0762 Sugie, Y., 88M/5473 Sugitani, Y., 88M/5089 Sugiura, N., 88M/0942, 1521 Sugiyama, K., 88M/3457, 5160 Suhayda, J. N., 88M/6338 Sujitno, S., 88M/3555 Sujjayakorn, P., 88M/3325 Suk, M., 88M/4380 Sukharzhevskiy, S. M., 88M/ 2163 Sukhorukov, Yu. T., 88M/5754 Sullivan, L. A., 88M/0124 Sullivan, R. W., 88M/1642, 1648 Sullivan, T. J., 88M/4112 Sumbler, M. G., 88M/2964 Sumi, K., 88M/1769 Summa, L. L., 88M/1349 Summons, R. E., 88M/2435, 4127 Sun, C., 88M/5592 Sun, D., 88M/0350, 3233 Sun, J., 88M/5720 Sun, R., 88M/3233 Sun, S., 88M/3357, 4266 Sun, S.-S., 88M/0648, 0676, 5594 Sun, S.-T., 88M/4919 Sunda, W. G., 88M/0925 Sundaram, V., 88M/4389, 4390 Sundby, B., 88M/2329 Sundvoll, B., 88M/5625 Sunkel, G., 88M/4563 Superceanu, C. I., 88M/3538 Suppe, J., 88M/4791 Suquet, H., 88M/0111, 1802, 1806 Surbeck, H., 88M/5688 Surdam, R. C., 88M/5793 Sureau, J.-F., 88M/3576 Sureda, R. J., 88M/1901 Surkov, N. V., 88M/5465 Surprenant, L. D., 88M/1951 Sury, R. De, 88M/4143 Sushchevskaya, N. M., 188M/ 0694 Sushchevskaya, T. M., 88M/ 5927 Sushchik, Yu. Y., 88M/0492 Suslova, S. N., 88M/3089 Susse, P., 88M/5155

Sustavov, O. A., 88M/1488 Susuki, K., 88M/5619 Sutcliffe, D. W., 88M/4009 Sutcliffe, R. H., 88M/1286 Suter, M., 88M/2520 Sutherland, F. L., 88M/1328, 5219 Suto, S., 88M/1630 Sutphin, D. M., 88M/0296 Sutter, J. F., 88M/0607, 4915 Sutton, S. R., 88M/2533 Suttor, H., 88M/6330 Suvorova, V. A., 88M/2000 Suwa, K., 88M/0994 Suzuki, C. K., 88M/2550 Suzuki, K., 88M/3261 Suzuki, N., 88M/2438 Suzuki, R., 88M/5259 Suzuki, T., 88M/2053, 2991. 3951 Suzuki, Y., 88M/3435 Suzuki-Kamata, K., 88M/1320, 6247 Svenson, S. A., 88M/3568 Sverjensky, D. A., 88M/3665 Svisero, D. P., 88M/2738 Swager, C. P., 88M/5212, 5282 Swaine, D. J., 88M/5727 Swallow, P. W., 88M/6110 Swallow, W. H., 88M/3623 Swanepoel, D. J. de V., 88M/ 4894 Swanson, D. 88M/1218, A., 1354, 4596 Swanson, S. E., 88M/0671, 2146, 2754 Swapp, S. M., 88M/1460 Swart, P. K., 88M/0795, 5743 Swartzendruber, L. J., 88M/ 3278 Sweet, A. R., 88M/4046 Sweetman, T. M., 88M/4470 Swennen, R., 88M/4035, 4641 Swider, K. T., 88M/3377 Swift, A., 88M/4635 Swinden, H. S., 88M/1643 Swindle, T. D., 88M/5969 Switsur, V. R., 88M/4909 Syers, J. K., 88M/0134 Sykes, M. A., 88M/4589 Sykes, M. L., 88M/0481 Sylvester, P. J., 88M/2913. 6044 Syme, E. C., 88M/0039 Symes, R. F., 88M/1278, 3336, 3571 Symonds, R. B., 88M/2245 Symons, M. C. R., 88M/5885 Synnott, P., 88M/2689 Syono, S., 88M/5412 Szabo, A. G., 88M/1738 Szabo, B. J., 88M/1596 Szabo, Cs., 88M/1307 Szabo-Balog, A., 88M/1307 Szacki, W., 88M/2039 Szafran, S., 88M/5890 Szamalek, K., 88M/1770, 3699

Szanto, F., 88M/3390 Szederkenyi, T., 88M/6241 Szefer, P., 88M/5694 Szepietowska, H., 88M/015t 5019 Szerszen, L., 88M/5326 Szewczyk, J., 88M/0907 Szili-Gyemant, P., 88M/3077 3080 Szymanski, A., 88M/2078 Szymborski, W., 88M/5009

Tabatabai, M. A., 88M/5341 Tabbagh, A., 88M/4557 Tabbagh, J., 88M/4557 Tabeart, C. F., 88M/0373 Taboada, T. M., 88M/5030 Tachikawa, O., 88M/3471 Tada, R., 88M/2009 Taddeucci, A., 88M/0766, 1613 4887 Tadini, C., 88M/3490, 5154 Tagai, T., 88M/3470, 3471 Taggart Jr, J. E., 88M/0110 2509 Tagiri, M., 88M/4745 Taguchi, K., 88M/5338 Taipale, K., 88M/1231 Taira, A., 88M/0775 Tait, J. M., 88M/1716 Tait, S. R., 88M/1204 Takach, N. E., 88M/4155 Takada, A., 88M/6196 Takahashi, E., 88M/0468, 1319 Takahashi, I., 88M/4782 Takahashi, M., 88M/1325, 5616 Takahashi, N., 88M/1281 Takahata, H., 88M/4250 Takami, Y., 88M/4954 Takaoka, N., 88M/5824 Takashima, I., 88M/1632 Takasu, A., 88M/3103 Takeda, H., 88M/0941, 347] 5970 Takeshita, H., 88M/1215 Takeshita, T., 88M/2729, 6441 Takeuchi, K., 88M/2174 Takeuchi, Y., 88M/3447, 3457 3462, 3481, 3482, 3498, 512 Taki, S., 88M/2081, 2082, 5510 Takigiku, R., 88M/2446 Talantsev, A. S., 88M/2607 Talarico, F., 88M/1475 Talbot, C. J., 88M/6121 Tamargo, J. L., 88M/1765 Tambiev, S. B., 88M/2388 Tambiyev, S. B., 88M/4002 4104 Tamura, R. M., 88M/6223 Tamura, S., 88M/0516 Tan, F. C., 88M/2441, 4150 4167 Tanaka, H., 88M/3492 Tanaka, K., 88M/0277, 5380 Tanaka, T., 88M/3905 Tanczyk, E. I., 88M/3142 Tanelli, G., 88M/1861, 2628

Taner, M. F., 88M/2577 Tang, J., 88M/5203 Tang, M., 88M/5961-5963 Tang, Y., 88M/1391 Tang, Z., 88M/3552 Tanida, K., 88M/5012 Taniguchi, H., 88M/3651 Tannenbaum, E., 88M/0863 Tapp, B., 88M/1181 Taran, Yu. A., 88M/0827 Taras, B. D., 88M/5669 Tarasenko, V. S., 88M/1265 Tarasov, L. S., 88M/0930, 5948 Y., 88M/2386, Tardy. 3853. 6333 Tari, G., 88M/4565 Tarkian, M., 88M/1018, 1026. 2633 Tarling, S. E., 88M/1814 Tarney, J., 88M/0682, 1703, 2792, 3049, 6154 Tarutani, T., 88M/4939 Tashima, T., 88M/5304 Tasov, B. M., 88M/4315 Tassel, R. Van, 88M/4334, 4639 Tatarata, M., 88M/1884 Tatekawa, M., 88M/2079 Tatsumi, Y., 88M/1375, 5524 Tatsumoto, M., 88M/1649, 2257 Tattevin, H., 88M/1008 Taube, A., 88M/5214 Tauber, H., 88M/0018 Taufen, P. M., 88M/5933 Tauson, V. L., 88M/3682 Tautelle, F., 88M/0442 Tavares de Freitas Carvalho, J., 88M/1860 Taylor, A., 88M/3143 Taylor, B. F., 88M/5886 Taylor, C. B., 88M/5827, 5828, 5850 Taylor, F. C., 88M/1646, 2703 Taylor, G., 88M/5287 Taylor, G. F., 88M/2469, 2470 Taylor, G. R., 88M/5283 Taylor, J. C., 88M/5162 Taylor, J. C. M., 88M/6314 Taylor, L., 88M/5306 Taylor, L. A., 88M/1292, 3721, 4420, 5533 Taylor, M. C., 88M/5336 Taylor, P. N., 88M/1117, 2325, 3919, 4053 Taylor, R. M., 88M/3753 Taylor, R. P., 88M/0645, 0646, 2136 Taylor, S., 88M/5208 Taylor, S. R., 88M/0928, 1114, 1115, 5757, 5761, 6315 Taylor, W. R., 88M/5392, /5400 Taylor Jr, H. P., 88M/3788, 3810 Taylor, W. E. G., 88M/1143 Taylor, W. R., 88M/0472, 0473 Taylor Jr, H. P., 88M/0484, 1222 Tazaki, K., 88M/0121, 1747,

1768, 2621, 5568, 5633, 6269

Tazawa, Y., 88M/4236 Tazieff, H., 88M/2901, 4546 Tazzoli, V., 88M/5099, 5460 Tchoubar, C., 88M/3367 Teale, G. S., 88M/0873, 3954, 5275 Tecce, F., 88M/1452 Tee Boon Goh, , 88M/0502 Teerman, S. C., 88M/1440 Teferra, M., 88M/0021 Tegtmeyer, A. R., 88M/0025 Teh-Lung, K., 88M/2316 Teichmuller, M., 88M/2406. 4678 Teil, H., 88M/1666 Tekverk, R. W., 88M/2500 Teleki, G., 88M/4191 Tella, S., 88M/1651, 1652 Telnxs, N., 88M/0848 Temnikov, Yu. I., 88M/5645 Temperley, S., 88M/4358 Tempier, P., 88M/0023, 3210 Temussi, I., 88M/1937 Tenginkai, S. G., 88M/3549 Ten Haven, H. L., 88M/0825, 0850, 1419, 4121, 5903 Tennant, W. C., 88M/0256 Tenu, A., 88M/5872 Tepperberg, M., 88M/3987 Terada, S., 88M/5103 Terakado, Y., 88M/5652 Teraoka, Y., 88M/2318 Terasaki, O., 88M/2606 Terashima, S., 88M/1680, 2282, 2318, 2879 Tercier, M. L., 88M/0086 Terekhina, I. V., 88M/0530 Ternet, Y., 88M/6169 Terpstra, R. A., 88M/1835 Terrell, D. J., 88M/0685 Terrill, J. E., 88M/5267 Terry, K. A., 88M/1689 Terzioglu, M. N., 88M/1314, 4566 Tescari, O. V., 88M/1578 Teschner, M., 88M/5919 Tesei, U., 88M/4119 Teskey, D. J., 88M/6207 Tessadri, R., 88M/4300 Tessensohn, F., 88M/4458 Tessier, A., 88M/5734 Tessier, B., 88M/1907 Testa, L., 88M/0766 Testa, S., 88M/3944 Tettenhorst, R. T., 88M/3365 Tewari, H. C., 88M/4394 Tex, E. den, 88M/2940 Teyssen, T., 88M/0055 Thalhammer, O., 88M/3893 Theobald, P. K., 88M/2488, 2501 Thiebaut, J., 88M/6060 Thieblemont, D., 88M/2206 Thierstein, H. R., 88M/0844 Thijssen, T., 88M/2326 Thirlwall, M. F., 88M/0699 Thivierge, R. H., 88M/1975 Thomann, W. F., 88M/0746 Thomas, A. J., 88M/3286

Thomas, A. V., 88M/5547 Thomas, C. W., 88M/1255 Thomas, D., 88M/1766, 2263 Thomas, J. M., 88M/2606 Thomas, M. D., 88M/4795 Thomas, P. G., 88M/4200, 4202, 4203 Thomas, R. F., 88M/5051 Thomassen, B., 88M/2150 Thomassin, J.-H., 88M/3639 Thompson, G., 88M/2293, 5569 Thompson, J. G., 88M/0140, 0143, 3725 Thompson, J. M., 88M/0747, 1372 Thompson, L. C., 88M/4960 Thompson, P., 88M/0008 Thompson, P. H., 88M/0990 Thompson, R. N., 38M/0699. 2204, 2931, 6152 Thompson, R. W., 88M/3745 Thompson, W. B., 88M/4410 Thompson Jr, J. B., 88M/3795 Thomson, I., 88M/0104 Thomson, J., 88M/2373 Thonat, A., 88M/4550 Thoni, M., 88M/6187 Thorez, J., 88M/3399 Thorkelson, D. J., 88M/2915 Thorleifson, L. H., 88M/4913 Thornber, C. R., 88M/4591 Thornton, E. C., 88M/0487 Thornton, I., 88M/0411, 1957 Thorp, J. A. L., 88M/1962 Thorpe, R. I., 88M/2630 Thorpe, R. S., 88M/2893, 4469, 6306 Thouin, C., 88M/3545 Threlkeld, C. N., 88M/4158 Thurlow, J. G., 88M/1643 Thwaites, A. M., 88M/6411 Thy, P., 88M/2810, 6288 Tian, K., 88M/5912 Tiberi, M., 88M/1362 Tibljas, D., 88M/6077 Tickoo, A. K., 88M/3240 Tielens, A. G., 88M/5964 J.-J., 88M/3545, Tiercelin, 4381 Tiffer, E. M., 88M/2133 Tikhonov, A. I., 88M/4099 Tilbrook, B., 88M/2398 Tiller, K. G., 88M/5420 Tilling, R. I., 88M/2256, 2259, 2509 Tillman, R. W., 88M/0134 Tillmann, B., 88M/5155 Tillmanns, E., 88M/1091, 1828, 3458, 5161 Tillyakhodzhayev, Kh. N., 88M/ Tilton, G. R., 88M/2515, 4431 Timoshkova, L. P., 88M/5388 Tindle, A., 88M/0713, 3016 Tindle, A. G., 88M/2828 Tingle, T. N., 88M/1695 Tinti, S., 88M/4558 Tipper, H. W., 88M/3005 Tipping, E., 88M/0845, 5894

Tirmizi, S. H., 88M/5403 Tischendorf, G., 88M/0631. 0716 Tischendorf, G., 88M/2464 Tison, J.-L., 88M/0762, 3847 Titayeva, N. A., 88M/0718 Titley, S. R., 88M/3564 Tkachenko, I. I., Tkhy, Ch. L., 88M/1067 Tlig, S., 88M/0759 Tobi, A. C., 88M/2595 Tobing, S. L., 88M/4618, 6126 Tobschall, H. J., 88M/2272 Todd, J. F., 88M/4182, 5803 Todorov, T. A., 88M/1916 Todorova, T., 88M/0191 Todt, W., 88M/2684, 4902 Toft, J., 88M/6382 Togari, K., 88M/6007 Toh, N., 88M/1752 Tokarev, V. G., 88M/5707 Tokonami, M., 88M/5151, 5160 Tola, F., 88M/5321 Tollo, R. P., 88M/1024 Tollon, F., 88M/0628 Tolomeo, L., 88M/5578 Tomaic, J., 88M/5769 Tomashpol'skiy, Yu. Ya., 88M/ 2516 Tomaszewski, J. B., 88M/4649 Tombacz, E., 88M/3390 Tombrello, T. A., 88M/6004 Tomihisa, D., 88M/3751 Tominaga, T., 88M/2323 Tomita, A., 88M/3395 Tomita, K., 88M/2574, 4981 Tomonori, O., 88M/2319 Tompkins, L. A., 88M/2507 Tomson, I. N., 88M/0289 Tomura, S., 88M/4983 Tong, W., 88M/1456 Tong, Y. L., 88M/2613 Tong Wei, 88M/1627 Toole, J., 88M/2373 Toon, O. B., 88M/0599 Topel-Schadt, J., 88M/5152 Topor, D. N., 88M/3149 Topping, G., 88M/1955 Toran, L., 88M/5342 Torcini, S., 88M/1759, 2380 Torgersen, T., 88M/2122, 3955 Torii, K., 88M/4982 Toriumi, M., 88M/0519 Tormey, D. R., 88M/0459 Tornos Arroyo, F., 88M/0340, Tornroos, R., 88M/2543 Torrent, J., 88M/3757 Torres-Martinez, L. M., 88M/ 3483 88M/1878, Torres-Ruiz, J., 1879 Torudbakken, B. O., 88M/0003, 1599 Toscani, L., 88M/1606, 2213 Tosdai, R. M., 88M/0042, 0892 Toselli, A. J., 88M/4534 Toselli, J. N. Rossi de, 88M/ 4534

Tossell, J. A., 88M/3497 Toteu, S. F., 88M/1620 Toth, M. N., 88M/6406 Toudic, Y., 88M/5443 Touet, F., 88M/5867 Tough, J. G., 88M/1906 Toulement, M., 88M/0764 Toulhoat, P., 88M/2377, 4090 Touray, J.-C., 88M/2153, 3639, Toure, S., 88M/0023 Touret, J., 88M/1113 Touret, J. L. R., 88M/3791 Tourneur, F., 88M/4014 Toverud, O., 88M/0886 Townend, R., 88M/0317 Townsend, C., 88M/1129 Townsend, M. G., 88M/5108, 5110 Tracy, R. J., 88M/4688 Trask, N. J., 88M/4186 Traub, W., 88M/1065 Traveria, A., 88M/4821 Traversa, G., 88M/0014, 6223 Travis, G. A., 88M/0353 Travnikova, I. G., 88M/5711 Travnikova, L. G., 88M/5712 Traylcom, S. C., 88M/2204 Trebes, J. E., 88M/1781 Trefry, J. H., 88M/4109, 5580 Trego, K. D., 88M/4204 Treloar, P. J., 88M/4246, 6120 Trescases, J. J., 88M/0393 Treuil, M., 88M/1223, 3927 Triboulet, C., 88M/2569, 6387, 6402 Trichet, J., 88M/0855, 3422 Triehet, J, 88M/1417 Triller, E., 88M/5944 Trindade, L. A. F., 88M/5899 Tripathi, B. R., 88M/0208 Triplehorn, D. M., 88M/4238 Tripp, R. B., 88M/2489 Triscari, M., 88M/4309 Trivedi, J. R., 88M/0723 Trivedi, R. K., 88M/5251 Trocine, R. P., 88M/5580 Trofimenko, G. L., 88M/2287 Trofimov, A. P., 88M/0378 Troll, G., 88M/3534 Trolliard, G., 88M/0702 V., 88M/3022, Trommsdorff, 3793, 6037 Trotsyuk, V. Ya., 88M/0846 Trotter, J., 88M/5130 Trt'iyakova, L. I., 88M/3772 Truckinovskiy, L. M., 88M/5379 Trudel, P., 88M/2577, 3964 Trukhin, V. I., 88M/3136 Trumbull, R. B., 88M/6430 Truscott, M. G., 88M/2358 Truskinovskiy, L. M., 88M/ 3647, 3718 Trythall, R. J. B., 88M/1143 Trzcienski Jr. W. E., 88M/6419 Tsepin, A., 88M/6444 Tsepin, A. I., 88M/0532, 1062, 2557 Tshidibi, N. B., 88M/4654

Tsimbal, L. F., 88M/0057 Tsipursky, S. I., 88M/1097 Tsirel'son, V. G., 88M/1792, 1820 Tsoy, K. S., 88M/5713 Tsuchiya, N., 88M/3482, 4506, 4507 Tsuchiyama, A., 88M/1299 Tsuji, M., 88M/1747 Tsukada, M., 88M/5131 Tsukimura, K., 88M/1797, 3451 Tsukui, M., 88M/1323 Tsunogai, S., 88M/2395, 5338 Tsurusaki, K., 88M/3608 Tsutsunava, T. N., 88M/1490 Tsvetkov, A. A., 88M/0730, 4440, 5647, 5648 Tsvetkov, F., 88M/1726 Tu, J., 88M/1866 Tu, S., 88M/5720 Tua, P., 88M/5286 Tucker, D. H., 88M/6198 Tucker, E. V., 88M/1670 Tufar, E., 88M/3561 Tufar, W., 88M/3561 Tuinstra, F., 88M/5159 Tuisku, P., 88M/0797 Tull, J. F., 88M/4518, 4519 Tuncel, G., 88M/2535 Tuncer, S., 88M/3282 Tuniz, C., 88M/4210 Turchetti, F., 88M/1362 Turco, G., 88M/6002 Turcotte, D. L., 88M/1209, 2933 Turekian, K. K., 88M/5599 Turi, B., 88M/0609, 3788 Turiel, J. L. Fernandez, 88M/ 0904 Turnbull, I. M., 88M/6417 Turner, A. M., 88M/3741 Turner, D. C., 88M/4490 Turner, D. L., 88M/3249 Turner, D. R., 88M/4072 Turner, G. L., 88M/0273 Turner, J. S., 88M/5770 Turner, R. R., 88M/1981 Turner, W. S., 88M/4426 Turnock, A. C., 88M/0252. 1799 Tuross, N., 88M/5887 Turpault, M.-P., 88M/3890 Turpin, L., 88M/3926, 4918 Turvey, D. J., 88M/5255 Tusek-Znidaric, M., 88M/3629 Tuzova, A. M., 88M/5426 Tweedie, J. R., 88M/1874 Twemlow, S. G., 88M/0325 Twist, D., 88M/0677 Tworo, A. G., 88M/2330 Twyman, J. D., 88M/2787 Tyagi, R., 88M/1729 Tye, R. S., 88M/5027 Tyler, J. E., 88M/1146 Tyler, S. R., 88M/0828 Tyminsky, V. G., 88M/0637

Ubanell, A. G., 88M/1241

Uchiyama, K., 88M/4250 Udaqawa, S., 88M/5406 3615, Ueda, A., 88M/1976, 3996 Ueda, S., 88M/5487 Uegaki, T., 88M/3751 Ugarkar, A. G., 88M/3549 Ugolini, F. C., 88M/0184 Ui, T., 88M/1320, 4579 Uijke, O., 88M/5666 Ujiie, H., 88M/2319, 5733 Ukhanov, A. V., 88M/2131 Ukpong, E. E., 88M/2466, 4489 Ullmann, G., 88M/0068 Ulmer, G. C., 88M/4414 Ulriksen, C. E., 88M/1658, 2191, 2879 Ulrych, J., 88M/4292 Umeji, A. C., 88M/3222 Umino, S., 88M/1321 Unama-Oparah, I., 88M/0207 Unan, C., 88M/4483 Unfricht, M., 88M/1569 Unger, C. P., 88M/5385 Unnam, J., 88M/3271 Unnikrishnan, V. P., 88M/4657 Unrug, R., 88M/0314, 0326 Unruh, D. M., 88M/2257, 5672 Upadhyaya, R., 88M/2239, 4500, 5745 Upreti, B. N., 88M/1277 Upson, C., 88M/4675 Upton, B. G. J., 88M/1188, 1699, 2740, 2803, 2813, 2891 Urabe, K., 88M/5406 Urai, J. L., 88M/0515 Uras, I., 88M/2463 Urban, N. R., 88M/5773 Urbanec, Z., 88M/2648 Uren, J. M., 88M/5297 Urrutia, M., 88M/5323 Urrutia-Fucugauchi, J., 88M/ 4857 Urusov, V., 88M/3508 Urusov, V. S., 88M/1792, 1820, 2048, 5116, 5423, 5452 Usacheva, G. M., 88M/0847 Ushakov, S., 88M/6124 Ushapovskaya, Z. F., 88M/4325 Usik, V. I., 88M/1489 Uspenskaya, T. Yu., 88M/3878 Ustinov, V. I., 88M/2131 Utada, M., 88M/5024 Uto, K., 88M/1318, 1629 Uttley, S., 88M/1561 Uyeda, S., 88M/3905 Uytterhoeven, L., 88M/6435 Uzaki, M., 88M/5904

Vaarma, M., 88M/2818 Vaasjoki, M., 88M/2175 Vaccari, G., 88M/5431 Vaccaro, C., 88M/553 Vachier, P., 88M/5868 Vad, E., 88M/2248 Vaganov, P. A., 88M/2430 Vahrenkamp, V. C., 88M/5743

Vaalsta, T. P., 88M/5156

Vaillancourt, P. D., 88M/1867 Vairavamurthy, A., 88M/2452 Valarelli, J. V., 88M/256 2880 Valeev, S. G., 88M/4190 Valence, G., 88M/2303 Valente, G. K., 88M/5495 Valentine, G. A., 88M/1355 Valeton, I., 88M/1938, 6333 Valetov, T. A., 88M/4258 Vali, H., 88M/1534, 4787 Valiukenas, V. I., 88M/6444 Val Klump, J., 88M/0412 Valladas, G., 88M/3227 Valladas, H., 88M/3227 Valley, J. W., 88M/1504, 5670 5746 Valois, J. P., 88M/2461 Valverde, G., 88M/0341 Van, A., 88M/4482 van Bekkum, H., 88M/0268 van Bever Donker, J. M., 88M 1167 Van Bockstael, M., 88M/5111 van Bosse, J. Y., 88M/4752 van Breemen, A., 88M/0602 van Breemen, O., 88M/0037 1641 Van Calsteren, P., 88M/0591 3017 van Calsteren, P. W. C., 88M 1126, 2767 Vance, E. R., 88M/2137 Vance, J. A., 88M/0980 Vance, R. K., 88M/0669 Vandamme, D., 88M/4575 van de Bilt, G. P., 88M/6326 van de Graaf, B., 88M/5914 Van de Kamp, P. C., 88M/1444 Vandelannoote, A., 88M/4017 Vandelannoote, R., 88M/0419 Van den Berg, C. M. G., 88M 0818, 1686, 2425, 4957 Vandenberghe, N., 88M/3398 Vandenbruawene, J., 88M/5111 Van Den Driessche, J., 88M 2726 van den Eeckhout, B., 88M 6377 van den Hoek Ostende, E. R. 88M/6326 van den Hul, H. J., 88M/0922 2946 van den Kerkhof, A. M., 88M 3886 Vandenvinne, R., 88M/3265 Vander Auwera, J., 88M/4708 van der Eerden, A. M. J. 88M/0559, 3734, 4271, 5472 Van der Flier-Keller, E., 88M 0783 van der Gaast, S. J., 88M/106 Vandergraaf, T. T., 88M/1965 van der Heyden, P., 88M/2874 Vandermeersch, B., 88M/3227 van der Merwe, N. J., 88M 1962 van der Plas, L., 88M/2583

an der Pluijm, B. A., 88M/ 4696 an der Sloot, H. A., 88M/5825 an der Wal, R. J., 88M/0240 an der Westhuizen, W. A., 88M/1261, 2555 /an Doesburg, J. D. J., 88M/ van Dorst, S., 88M/1957 Vanek, J., 88M/2706, 4854 van Eenbergen, A., 88M/3314 van Emburg, P. R., 88M/5825 van Everdingen, R. O., 88M/ van Gaans, P., 88M/5847 van Gaans, P. F. M., 88M/0923 van Geen, A., 88M/4091 Vangheli, D. A., 88M/3778 Van Grieken, R., 88M/0419, 2312 Van Grieken, R. E., 88M/0073, 1661, 4959 van Groos, A. F. K., 88M/3361 van Groos, A. F. Koster, 88M/ van Hees, E., 88M/5528 van Hoek, J., 88M/3478 Van Houten, F. B., 88M/2957 Van Kauwenbergh, S. J., 88M/ 6079 van Koningsveld, H., 88M/0268 van Kooten, G. K., 88M/0893 Vankova, V., 88M/2352 Van Leeuwen, T. M., 88M/0646 Vanlerberghe, L., 88M/2229 Van Loenen, R. E., 88M/5292, 6027, 6028 van Marcke de Lummen, G., 88M/3812 van Moort, J. C., 88M/4177, 5222 van Nes, M., 88M/2812 Vannucci, R., 88M/0710 van Raaphorst, J. G., 88M/ 3856 van Reenen, D. D., 88M/3085, 5546 Van Rees, K. C. J., 88M/3431 van Riessen, A., 88M/1044 van Rosmalen, G. M., 88iM/ 5429, 5430 Van Schaftingen, J. J., 88M/ 0434 van Smaalen, S., 88M/0233 van Staal, C. R., 88M/2268 van Straaten, H. P., 88M/0336 van Straaten, P., 88M/1932 Van Tassel, R., 88M/4334, 4639 Van Velthuizen, J., 88M/1093 van Vliet-Lance, B., 88M/2656 Van Wagoner, N. A., 88M/2916 Van Wambeke, L., 88M/4493 van Weering, T. C. E., 88M/ 2306 Van't Dack, L., 88M/0419, 2312, 4017 Varentsov, I. M., 88M/0504 Varkevisser, D., 88M/0189 Varma, H. M., 88M/1920

Varnavas, S. P., 88M/1883. 3582, 3583, 5703, 5731 Varne, R., 88M/0680, 2246. Vartanyan, G. S., 88M/2389 Vaslet, N., 88M/3545 Vasseur, G., 88M/2727 Vasil'ev, V. I., 88M/1092, 4340 Vasilieva, A. I., 88M/2144 Vasil'eva, S. N., 88M/0582 Vassilikou-Dova, A. B., 88M/ 3440 Vasil'yev, I. A., 88M/2367 Vasilyev, Yu. R., 88M/6046 Vauchez, A., 88M/1101 Vaughan, D. E. W., 88M/1817 Vaughan, D. J., 88M/3497, 5137, 5149 Vaynberg, V. I., 88M/0771 Vaynshsteyn, M. B., 88M/4034 Vazquez, F. Macias, 88M/0205, 0206 Vdovina, I. A., 88M/0291 Vearncombe, J. R., 88M/6184 Veblen, D. R., 88M/3466 Veeh, H. H., 88M/2321, 3242 Veeman, W. S., 88M/3478 Veizer, J., 88M/5762, 5947 Vekinis, G., 88M/0564 Veksler, I. V., 88M/0571 Velasco, F., 88M/0398, 1909 Velde, B., 88M/3735, 6036 Velde, D., 88M/0998, 1027, 3926 Velikoslavinskii, D. A., 88M/ Velinsky, D. J., 88M/5739 Vella, P., 88M/4406 Vellutini, P., 88M/1386, 4572 Vellutini, P.-J., 88M/2692 Velthuizen, J. Van, 88M/1093 Velyukharova, T. K., 88M/4140 Vengosh, A., 88M/3987 Venhuis, G. J., 88M/1228 Venkatachala, B. S., 88M/0773 Venkataramana, P., 88M/1390 Venkatesan, M. I., 88M/2439, 2444, 2445, 4145 Ventura, G. C. Della, 88M/ 1576 Ventura, G. Della, 88M/1003 Ventura, G. G. Della, 88M/ 4819 Verba, M. P., 88M/3408 Verdes, G., 88M/2037 Verdier, O., 88M/6267 Verghese, K., 88M/3308 Vergniolle, S., 88M/4542 Vergo, N., 88M/4977 Verighin, M. I., 88M/3894 Verkaeren, J., 88M/3812 Verkhovskiy, A. B., 88M/5711 Verma, S. P., 88M/0685, 1363, 1366 Vernet, J.-P., 88M/1958 Vernet, M., 88M/1223 Vernie, P., 88M/0997 Vernon, P. D., 88M/4637

Vernon, R. H., 88M/1457, 6201, 6415 Verosub, K. L., 88M/1349 Verraes, G., 88M/0628, 3578 Verschure, R. H., 88M/1659 Vershinin, A. S., 88M/1889 Verwoerd, W. J., 88M/4590 Vetrin, V. R., 88M/1267 Vetter, U., 88M/4458 Veysseyre, R., 88M/3493 Vezzalini, G., 88M/0267, 1086, 2624, 3487, 3489 Vezzoli, L., 88M/1361 Vhiasa, A., 88M/5165 Viaene, W., 88M/3398, 4035, 4641 Vialette, Y., 88M/1607, 3210 Vicat, J., 88M/5144 Vicat, J.-P., 88M/1386, 2692 Vicente, M. T., 88M/0116 Vickery, A. M., 88M/0957 Vidal, J. P., 88M/1819 Vidal, P., 88M/1277, 5627 Vidal-Valat, G., 88M/1819 Viegas, L., 88M/2462 Vieillard, P., 88M/3722, 5074 Viellenave, J. H., 88M/5929 Vielzeuf, D., 88M/3650, 5375 Viera dos Santos, F. J., 88M/ 3716 Viereck, L., 88M/6239 Viereck, L. G., 88M/2951 Viewing, K. A., 88M/0310, 0911 Viglino, J. A., 88M/0563, 4930 Vigneresse, J. L., 88M/6452 Vikent'ev, I. V., 88M/3149 Vikre, P. G., 88M/5240 Vila, E., 88M/1660, 5068 Viljoen, M. J., 88M/0332 Vilks, G., 88M/4150 Villa, I. M., 88M/1606 Villa, N., 88M/1984 Villar, F. J. Luque del, 88M/ 5445, 6473 Villar, H., 88M/4153 Villari, L., 88M/6237 Villarroel, H. S., 88M/1016 Villars, P., 88M/3341 Villaseca, C., 88M/1607 Villemant, B., 88M/0605, 5630 Villemure, G., 88M/1738 Villeneuve, M., 88M/3174 Villumsen, A., 88M/2372 Vincens, A., 88M/4381 Vincent, C. L., 88M/5332 Vincent, E., 88M/3978 Vincent, P. M., 88M/2908, 2929 Vincent, W. F., 88M/5332 Vincenz, S. A., 88M/1531 Vindel, E., 88M/5248 Vindel Catena, E., 88M/0342 Vines, K. J., 88M/5618 Vinogradova, N. P., 88M/3089 Viode, J.-P., 88M/4605 Virgos Rovira, J. M., 88M/1507 Virgo, D., 88M/0447, 0471, 3689 Virkar, A. V., 88M/5410

Visentin, E. J., 88M/4570 Visser, J. N. J., 88M/1075 Vissers, R. L. M., 88M/6377 Viswanath, T. A., 88M/0959 Viswanathan, C. V. K., 88M/ 6190 Vita-Finzi, C., 88M/0027 Vitel, G., 88M/1471 Vito, M. Di, 88M/1303 Vitturi, L. M., 88M/3635 Vivallo, W., 88M/0626 Vivier, G., 88M/4685 Vivo, B. de, 88M/0609 Vlachos, A., 88M/0564 Vladimirov, V. D., 88M/3541 Vlasova, E. V., 88M/2131 Vlasova, L. N., 88M/4140 Vliet-Lance, B. van, 88M/2656 Vochten, R., 88M/2650 Voegel, J. C., 88M/0239 Voegeli, D. A., 88M/6179 Voelkel, H., 88M/5688 Vogel, J. S., 88M/3982 Vogler, P., 88M/0716 Vogtmann, J., 88M/3855 Voight, B., 88M/6229 Vojvodie, V., 88M/4185 Vokes, F. M., 88M/0339, 1851 Vokhmentsev, A. Ye., 0581 Vokurka, K., 88M/2744 Volbert, B., 88M/3314 Voldan, J., 88M/0451 Voldet, P., 88M/2226 Volk, T., 88M/5684 Volkman, J. K., 88M/2410, 4127 Volkov, A. A., 88M/4102 Volkov, I. I., 88M/0777 Volkova, N. I., 88M/0771 Vollmer, R., 88M/2230, 3790 Voloshin, A. V., 88M/1085 Volosov, A. G., 88M/5927 Voltaggio, M., 88M/1613, 4887 Voltz, M., 88M/3421 Volzone, C., 88M/0148 Von Bergen, D., 88M/1404 Voncken, J. H. L., 88M/0559, 3734, 4271, 5483 von Gehlen, K., 88M/4074 von Gruenewaldt, G., 88M/1195 von Knorring, O., 88M/2613 von Stackelberg, U., 88M/3518 von Heune, R., 88M/4852 Vorobiev, Yu. K., 88M/0531 Vorob'vev, Yu. K., 88M/0533 Voronov, A. N., 88M/5530 Voronov, V. S., 88M/0690 Voronovsky, S. N., 88M/3091 Vos, A., 88M/0240 Voshage, H., 88M/2216 Voskresenskaya, N. T., 88M/ 5083 Vossen, K., 88M/5299 Voutsinou-Taliadouri, F., 1M88 3583 Vovk, I. F., 88M/3832 Voyer, J., 88M/3714

Voznyak, D. K., 88M/2134 Vrana, S., 88M/5995 Vranai, A., 88M/2941 Vriend, S. P., 88M/0923 Vry, J., 88M/5746 Vu Minh, D., 88M/5948 Vu Minh, Dang, 88M/0930 Vuagnat, M., 88M/2211, 2970 Vuataz, F.-D., 88M/3291, 4084, 4085 Vugman, N. V., 88M/2456 Vugrinovich, R., 88M/4779

Vuletich, A., 88M/4158
Vyshemirskiy, V. S., 88M/2431
Vysotskaya, V. A., 88M/1012

Waal, S. A. de, 88M/4497
Wachtler, E., 88M/0092
Wada, H., 88M/3414, 4063
Wada, K., 88M/1763

Vuichard, J. P., 88M/6397

Vuilleumier, J. J., 88M/0086

Wada, S.-I., 88M/2076, 4975, 4984 Waddington, W. G., 88M/0239 Wade, D. N., 88M/5013, 5014

Wadi, K., 88M/4975 Wadsworth, W. J., 88M/6153 Wagenbreth, O., 88M/0092 Wagener, K., 88M/4078 Waggoner, D. G., 88M/5677 Waghmare, B. P., 88M/3096 Wagner, C., 88M/0998, 1027

Wagner, F. E., 88M/0614 Wagner, J.-F., 88M/0149 Wagner, M. J., 88M/4859 Wagner, R. E., 88M/0417 Wagner, R. J., 88M/0664

Wagoner, N. A. Van, 88M/2916 Wait, R. B., 88M/4596 Wakamatsu, T., 88M/1859 Wakeham, S. G., 88M/0832,

4148 Wakita, H., 88M/0734, 5651, 5683, 5834

Wal, R. J. van der, 88M/0240 Walanus, A., 88M/2646 Walcher, E., 88M/3159

Walde, D., 88M/3992 Waldman, M. A., 88M/4428 Waldron, J. W. F., 88M/2997 Walenta, K., 88M/1580, 3163,

4812 Wali, A. M. A., 88M/2984 Wali, M. A., 88M/0176 Walker, B. H., 88M/2826, 2827

Walker, D., 88M/1398 Walker, G. P. L., 88M/1333, 6228

Walker, G. S., 88M/6096 Walker, J. A., 88M/2926 Walker, J. C. G., 88M/2119,

3172 Walker, P. H., 88M/5042 Walker, R. J., 88M/3965 Walker, W. J., 88M/3380

Wall, A., 88M/5100 Wall, F., 88M/2102 Wall, V., 88M/3107
Wall, V. J., 88M/0430, 1848, 1997, 2071, 4338
Wallace, D. O., 88M/1549
Wallace, M. E., 88M/6297
Wallace, W. K., 88M/4408
Wallraven, F., 88M/3226
Walls, C., 88M/1547
Walraven, F., 88M/2672
Walsh, J. J., 88M/2672
Walsh, J. N., 88M/2672
Walsh, J. N., 88M/2231, 2847, 6184
Walsh, P. T., 88M/2966
Walshe, J. L., 88M/0650, 1851,

Wall, G. J., 88M/4951

Walshe, J. L., 88M/0650, 1851, 2011, 5285 Walter, F., 88M/2563 Walters, M., 88M/0062 Walther, J. V., 88M/0496

Walther, J. V., 88M/0496 Walton, D., 88M/1544 Walzer, U., 88M/4792 Wambeke, L. Van, 88M/4493

Wan, C., 88M/0250 Wan, C. C., 88M/1690 Wan, D., 88M/6033 Wan, G. J., 88M/6328 Wan, J., 88M/0486

Wan, Z., 88M/0852 Wand, U., 88M/2350 Wandji, R., 88M/0115

Wang, B.-Xi., 88M/1547 Wang, C., 88M/0222, 0642, 4042

Wang, C.-Y., 88M/4689 Wang, D., 88M/1890, 2520, 2861

Wang, F., 88M/0642 Wang, G., 88M/0623 Wang, G.-F., 88M/6030 Wang, H., 88M/2242, 3126

Wang, H., 68M/1290 Wang, J., 88M/3595 Wang, K., 88M/0032 Wang, L., 88M/5588

Wang, M., 88M/1866, 4742 Wang, M. C., 88M/5468 Wang, Ru Chen, 88M/4289

Wang, Ru Chen, 88M/4289 Wang, S., 88M/2241, 3235, 3236, 4233

Wang, W., 88M/1957 Wang, W.-S., 88M/5509 Wang, X., 88M/1028, 2168

Wang, Y., 88M/0306, 0594, 5446, 5583, 5720
Wang, Y. L., 88M/4007

Wang, Y. L., 88M/4007 Wang, Z., 88M/0306, 2390 Wang Song, You, 88M/4783 Wang, Z., 88M/5912, 6033

Wangersky, P. J., 88M/3264 Wanke, H., 88M/0943 Wanninkhof, R., 88M/5343

Wanty, R. B., 88M/0836 Ward, A. P., 88M/4909

Ward, D. M., 88M/5900 Ward, J. H. W., 88M/3546 Ward, P., 88M/2679

Ward, W. T., 88M/1636 Wardle, R. J., 88M/2183, 2253 Warne, S. St. J., 88M/4302
Warner, R. D., 88M/6458
Warren, C. J., 88M/3620
Warren, J. K., 88M/4039
Warren, R. G., 88M/1359
Warren, W. P., 88M/3574
Warrier, S., 88M/1427
Warsi, W. E. K., 88M/6497
Wasilewski, P., 88M/6458
Wasilewski, P., 88M/6771
Wasserburg, G. J., 88M/0048, 0749, 0822, 2597, 3785, 4218, 4219, 4221
Wasson, J. T., 88M/0949, 0958,

Wasson, J. T., 88M/0949, 0958, 4211, 4217 Wasson, R. J., 88M/1638

Watanabe, D., 88M/2606
Watanabe, M., 88M/1631
Watanabe, S., 88M/4230
Watanabe, T. 88M/0180

Watanabe, T., 88M/0180, 4987 Watanuki, K., 88M/2438 Waterhouse, J. B., 88M/6294

Waters, D. J., 88M/1485 Waters, F. G., 88M/3015

Waters, R. A., 88M/4634 Watkeys, M. K., 88M/1483 Watkins, R. T., 88M/3223, 4893 Watson, A. E., 88M/4946

Watson, D. F., 88M/6309 Watson, E. B., 88M/0428, 0482,

3649, 3674 Watson, J. S., 88M/4943

Watt, J. M., 88M/0411 Watters, W. A., 88M/0108 Waychunas, G. A., 88M/5080 Wayne, D. M., 88M/6001

Wayne, D. M., 88M/6001 Weare, J. H., 88M/0437, 3664 Weathers, M. S., 88M/5402 Weaver, B. L., 88M/2792, 304

Weaver, B. L., 88M/2792, 3049, 6154 Webb, B. C., 88M/4378

Webb, J. A., 88M/3479, 3840 Webb, P. C., 88M/0627, 2828, 4883, 4943

Webb, T. H., 88M/5050, 5057 Weber, E., 88M/3245 Weber, F., 88M/1166

Weber, H., 88M/5972 Weber, J. H., 88M/5775 Weber, K., 88M/1111

Weber-Diefenbach, K., 88M/ 1388, 6222 Webster, J. G., 88M/2178, 5790

Webster, J. G., 88M/2178, 5790 Webster, J. R., 88M/1503 Webster, R., 88M/0201, 0202 Wedepohl, K. H., 88M/0103,

2234, 4564 Weed, R., 88M/2671

Weering, T. C. E. van, 88M/ 2306

Wegscheider, W., 88M/3309, 3318 Wehner, H., 88M/5919 Wei, J., 88M/2026

Wei, K., 88M/2390 Wei, Q.-Y., 88M/1543 Wei, Tong, 88M/1627

Wei, W.-C., 88M/5381 Weidner, D. J., 88M/0249 Weidner, J. R., 88M/0460 Weigel, D., 88M/3493 Weihed, P., 88M/3568 Weijnen, M. P. C., 88M/5429 5430 Weiner, S., 88M/1065

Weinstein, S. A., 88M/4413 Weir, G. J., 88M/6260 Weirich, F. H., 88M/6353 Weis, D., 88M/2195, 2597, 4441 Weisbrod, A., 88M/3875, 3936 4306 Weise, C., 88M/2100

Weise, S., 88M/5854
Weiser, G., 88M/5086
Weiskirchner, W., 88M/0963
Weiss, D., 88M/4414
Weiss, H., 88M/2524
Weiss, H. V., 88M/0418
Weiss, R. F., 88M/4081
Weiss, Z., 88M/0264

Weiss Jr, C. A., 88M/1805

Weissel, J. K., 88M/4619
Welch, C. W., 88M/5488
Welhan, J. A., 88M/3834
Welin, E., 88M/2680, 3201
Welke, H. J., 88M/0803
Wells, N., 88M/5337
Wells, S. G., 88M/1447
Welsink, H., 88M/2699
Wen, J., 88M/5667
Wen, S., 88M/0352
Wenck, A., 88M/5808
Wendt, I., 88M/3217
Wenk, H.-R., 88M/2728, 2729

6441 Wensink, H., 88M/4574 Went, D. J., 88M/6322 Wentworth, C., 88M/4791 Wentworth, S. J., 88M/5955

Wenzel, T., 88M/4646
Werk, M. L., 88M/5141
Werner, C.-D., 88M/2351
Wersin, P., 88M/3020
Werth, E., 88M/6328

Wesolowski, D., 88M/4529 Wessel, I., 88M/3714 Wessel, P., 88M/3150 Wessicken, R., 88M/1813

West, A. R., 88M/3483, 3732 West, H. B., 88M/2265 Westbrook, G. K., 88M/4607

Westerlund, S., 88M/5799, 5804 Westhuizen, W. A. van der 88M/1261, 2555 Westman, F., 88M/5879

Weston, R. J., 88M/2437, 5908 Westra, L., 88M/1467 Westrich, H. R., 88M/4931 Westrum Jr, E. F., 88M/3770 Wetherill, G. W., 88M/5985 Wettig, E., 88M/5299

Wetzel, K., 88M/2198 Wever, H. E., 88M/4511 Wevers, J. M. A. R., 88M/4271

Wezel, F. C., 88M/5701 Whalen, J. B., 88M/1641, 2869

6202

Whalley, J. W., 88M/0054 Wheeler, J., 88M/6375 Whelan, D. A., 88M/1781 Wheller, G. E., 88M/0680, 5653 Wherry, D., 88M/3301 Whipple, F. L., 88M/5986 Whitaker, W. G., 88M/2697 White, A. J. R., 88M/6199 White, B. S., 88M/5482 White, G. K., 88M/1508 White, J. D. L., 88M/4603 White, J. S., 88M/2567, 2600, 2655 White, J. W. C., 88M/5860 White, R. E., 88M/0126 White, R. S., 88M/4607 White, T. J., 88M/6057 White, W. M., 88M/0684, 0697 Whitechurch, H., 88M/1385, 6291 Whitehead, D., 88M/2965 Whitehead, D. C., 88M/0199 Whitehead, N. E., 88M/5932 Whitehead, R. E., 88M/4005 Whitehouse, M. J., 88M/3203 Whiteman, J. A., 88M/4986 Whitfield, M., 88M/4072 Whitford, D. J., 88M/5598, 6248 Whiticar, M. J., 88M/4165 Whitney, G., 88M/5003 Whitney, J. W., 88M/3198 Whittaker, S. G., 88M/0784 Whitton, J. S., 88M/5052 Whyte, J. B., 88M/0874 Wickham, J., 88M/1181 Wickramasinghe, D. T., 88M/ 2512 Wicks, F. J., 88M/1096, 1804, 2664 Widemann, N., 88M/1581 Widnall, M. A., 88M/5190, 5924 Wiechowski, A., 88M/3855 Wiedemann, C. M., 88M/6225 Wiedemann, K. E., 88M/3271 Wiedenbeck, M., 88M/1610, 1612 Wiegman, J., 88M/1724 Wiegmann, J., 88M/3371 Wiens, R. C., 88M/4228 Wiese Jr, R. G., 88M/2638 Wiesenburg, D. A., 88M/4114 Wieser, T., 88M/2605 Wiesmann, H., 88M/4187, 4188 Wiewiora, A., 88M/1740, 2305, 3405 Wiggering, H., 88M/1775 Wijbrans, J. R., 88M/1639 Wikberg, P., 88M/1967 Wildberg, H. G. H., 88M/4460 Wilde, A. R., 88M/3240 Wilde, P., 88M/5780 Wilde, R. H., 88M/5054, 5055 Wilding, L. P., 88M/3436 Wilhelm, E., 88M/5922 Wilhelms, D. E., 88M/4186 Wilke, B.-M., 88M/0224 Wilke, H.-J., 88M/3171

Wilkes, G. P., 88M/6349

Wilkins, R. W. T., 88M/4278 Wilkinson, H. T., 88M/5001 Wilkinson, I., 88M/1148 Wilkinson, J. F. G., 88M/6204 Wilkinson, P., 88M/5339 Wilks, E. M., 88M/2090 Wilks. J., 88M/2090 Wilks, M. E., 88M/4400 Willaime, C., 88M/1008, 2050 Willan, R. C. R., 88M/5233 Willgallis, A., 88M/3945 Williams. A. E., 88M/5545. 5789 Williams, Authors' reply. R. W., 88M/4891 Williams, B. J., 88M/1414 Williams, B. P. J., 88M/6322 Williams, C. T., 88M/0597 Williams, D. B., 88M/5975 Williams, D. F., 88M/4032, 5833 Williams, G. A., 88M/2188 Williams, G. D., 88M/1105 Williams, H. R., 88M/6409 Williams, I. S., 88M/4877, 4904, 4905 Williams, J. H., 88M/0420 Williams, K. L., 88M/0099 Williams. L. A. J., 88M/1622. 3224 Williams, L. B., 88M/2471 Williams, M. R., 88M/6079 Williams, P. J., 88M/1449, 4715 Williams, P. R., 88M/5654, 6197 Williams, P. W., 88M/5829 Williams, Q., 88M/3690, 5363 Williams, R., 88M/5382 Williams, R. T., 88M/1106 Williams, S. A., 88M/6095 Williams, S. C., 88M/6445 Williams, S. N., 88M/2883 Williams III, A. J., 88M/4666 Williams, W., 88M/6442 Williams-Jones, A. E., 88M/ 4752 Williamson, M., 88M/1547 Willie, S. N., 88M/1687, 4949 Willink, R. J., 88M/4137 Willmore, L. M., 88M/5528 Willoughby, K. L., 88M/6489 Wills, K. J. A., 88M/5272 Wilshire, H. G., 88M/4416 Wilson, A. D., 88M/0217 Wilson, A. F., 88M/5234 Wilson, C. J. N., 88M/0105, 4909 Wilson, G., 88M/3454, 3728 Wilson, G. B., 88M/3836 Wilson, G. C., 88M/0658 Wilson, J. F., 88M/0328 Wilson, J. G., 88M/5254 Wilson, J. L., 88M/0789 Wilson, J. R., 88M/1190, 1203 Wilson, K. M., 88M/6496 Wilson, M., 88M/4975 Wilson, M. J., 88M/0207, 1716 Wilson, M. R., 88M/1135, 2816

Wilson, O. M., 88M/1013 Wilson, P., 88M/3296 Wilson, S., 88M/0926 Wilson, S. L., 88M/0835 Wilson, S. M., 88M/2539 Wilson, W. E., 88M/3151 Wilton, D. H. C., 88M/0327, 2183 Wims, A. M., 88M/0068 Winchester, J. A., 88M/1234. 3332, 4054, 4355, 4366-4368, Windia, W., 88M/0862 Windley, B. F., 88M/3120, 4738 Windom, K. E., 88M/5385 Winn Jr, R. D., 88M/0358 Winsor, C. N., 88M/1173 Winston Russell, C., 88M/4530 Winter, M., 88M/1543 Winterburn, P. A., 88M/3014 Winterer, E. L., 88M/3180 Wintle, A. G., 88M/4913 Wintsch, R. P., 88M/1503, 1655 Wirth, R., 88M/3193 Wiseman, W. J., 88M/6338 Wiszniewska, J., 88M/2158 Wit, M. J. de, 88M/2943 Witek, B., 88M/0156 Withers. R. L., 88M/0140, 3725 Witt, W. K., 88M/5213, 6370 Wixson, B. G., 88M/0421 Woakes, M., 88M/0335 Woensdregt, C. F., 88M/1835, 5483 Woensdregt, G. F., 88M/1063 Woermann, E., 88M/3641, 5408 Wogelius, R. A., 88M/5311 Wojciechowska, I., 88M/4727 Wojnar, B., 88M/4442 Wold, S., 88M/0899 Wolery, T. J., 88M/3742 Wolf, E., 88M/3318 Wolf, G. H., 88M/5132 Wolf, M., 88M/4644 Wolf, R., 88M/2528 Wolfers, P., 88M/5144 Wolff, J. A., 88M/2841 Wolff, P. M. de, 88M/5159 Wolfli, W., 88M/2520 Wolfson, I., 88M/4277 Wolters, A., 88M/1564 Wolters, J., 88M/1564 Wones, D. R., 88M/1288 Wong, C. S., 88M/4037 Wong, I. G., 88M/4791 Wong, M.-S., 88M/0544 Wong O, V., 88M/4855 Wong-Ng, W., 88M/1011, 3274, 3446, 4286, 4923 Wood, A., 88M/0196 Wood, B. J., 88M/0524, 3662, 5417 Wood, C. J., 88M/4632 Wood, D. A., 88M/2792 Wood, J. A., 88M/0947 Wood, J. R., 88M/5795 Wood, L. A., 88M/1670 Wood, L. F., 88M/1308

Wood, M. I., 88M/3636

Wood, S. A., 88M/3688 Woodcock. N. H., 88M/1139. 1140, 1145, 1146, 1155, 4378 Wooden, J. L., 88M/3974 Woodhead, J. D., 88M/0735, 5657 Woodruff, L. G., 88M/0656 Woods, A., 88M/6227 Woods, R., 88M/2043 Woods, T. L., 88M/0106 Woods, W., 88M/0495 Woodward, C., 88M/3330 Woof, C., 88M/5894 Woolhoose, A. D., 88M/5908 Woolhouse, A. D., 88M/2437 Woolley, A. R., 88M/2797, 4491, 6182 Wopenka, B., 88M/0610, 0956, 4224, 5539 Workman, S. M., 88M/4001 Worl, R. G., 88M/4759 Worm, H.-U., 88M/1526, 1539, 4237 Wormald, M. R., 88M/1698 Worner, G., 88M/6239 Worrall, W. E., 88M/3397 Worstell, J. H., 88M/0283 Worthing, M. A., 88M/0995, 2545 Wouters, P., 88M/0434 Wright, A., 88M/2753 Wright, A. E., 88M/4369 Wright, D. W., 88M/4943 Wright, G. J., 88M/3623 Wright, I. P., 88M/5956, 5961, 5968 Wright, J., 88M/0384 Wright, J. E., 88M/6304 Wright, J. V., 88M/4606, 6250 Wright, L. D., 88M/6338 Wright, R. K., 88M/1498 Wright, T. L., 88M/1218, 1342, 2256 Wronkiewicz, D. J., 88M/2307 Wu, C., 88M/2170, 5589 Wu, D., 88M/2044, 2045 Wu, F. T., 88M/3147 Wu, G., 88M/0643 Wu, L., 88M/2906 Wu, M., 88M/3357 Wu, Q., 88M/0754 Wu, Y., 88M/1923, 5589 Wust. G. H., 88M/3066 Wyatt, P. H., 88M/2328, 4913 Wyborn, D., 88M/2866, 4510, 5220 Wybrecht, E., 88M/2585 Wyers, G. P., 88M/5634 Wyld, S. J., 88M/6304 Wylie, A. G., 88M/1029 Wyllie, P. J., 88M/1212, 2774, 3643, 4461, 5369 Wyns, R., 88M/0701 Wyrwicki, R., 88M/1770 Wyszomirski, P., 88M/5007, 5475 Wyttenbach, A., 88M/0693

Xefteris, A., 88M/3921 Xia, L., 88M/4240 Xiao, Z., 88M/1429 Xiao-quan, S., 88M/1688 Xie, H., 88M/6195 Xie, M., 88M/4796 Xie, X., 88M/0262 Xin, M., 88M/0852 Xing, F., 88M/3553 Xiong, D., 88M/2026 Xiong, J., 88M/0402 Xiong, L., 88M/1552 Xu, B., 88M/3126 Xu, H., 88M/6195 Xu, J., 88M/0209 Xu, R., 88M/3231, 3232 Xu, W., 88M/2433 Xu, X., 88M/1924 Xu, Y., 88M/2434 Xu, Z., 88M/1923 Xuemin, G., 88M/5891

Yabuki, H., 88M/0936

Yachmenev, V. Ye., 88M/5477 Yacout, A. M., 88M/3307, 3308 Yadintsev, S. V., 88M/0688 Yagi, K., 88M/0940, 1215 Yagi, T., 88M/3709 Yag'yayeva, S. M., 88M/4141 Yakhontova, L. K., 88M/4312 Yakovlev, B. G., 88M/5388 Yakovlev, O. I., 88M/3708, 5949 Yakovlev, Y. N., 88M/3088 Yakovlev, Yu. V., 88M/4104 Yakovleva, O. A., 88M/4313 Yalcin, H., 88M/1423 Yalcin, N., 88M/4135 Yamada, H., 88M/2551, 4038, 5380 Yamada, M., 88M/4105 Yamada, N., 88M/1629 Yamaguchi, 88M/2356, M., 4341 Yamaguchi, O., 88M/0529, 3751 Yamaguchi, Y., 88M/2574 Yamamoto, H., 88M/1320 Yamamoto, S., 88M/2319, 5733, 5904 Yaman, S., 88M/0375 Yamanaka, T., 88M/0941, 3462 Yamano, M., 88M/3905 Yamazaki, J., 88M/1628 Yamazaki, K., 88M/2606 Yan, Y., 88M/2001 Yan, Z., 88M/5589 Yanagase, T., 88M/2061 Yanagi, T., 88M/2132, 2243 Yanak, M., 88M/1454 Yang, J., 88M/0510, 0511, 5960 Yang, J. S., 88M/0590 Yang, L., 88M/0352 Yang, Q .- B., 88M/0235 Yang, R., 88M/2906 Yang, S., 88M/1553, 5650 Yang, W., 88M/6435 Yang, W.-H., 88M/1784 Yang, Y., 88M/2862, 5912

Yang, Z., 88M/0209 Yang, Z.-S., 88M/6338 Yapp, C. J., 88M/5565 Yardley, B. W. D., 88M/1904, 3923, 6357 Yarmolyuk, V. V., 88M/1273, 2854, 4440 Yaroshevskiy, A. A., 88M/0598, 2237 Yasuda, T., 88M/2599 Yau, Y.-C., 88M/0453, 2612, 6373 Yazeva, R. G., 88M/0725 Yazgan, E., 88M/4480 Yeates, T. O., 88M/5069 Yegorov-Tismenko, Yu. 88M/3508 Yeh, H.-W., 88M/5756 Yelin', S., 88M/3861 Yen, F. S., 88M/5468 Yen, T. F., 88M/4164 Yeo, W. J. A., 88M/2815 Yesikov, A. D., 88M/0827 Yesinowski, J. P., 88M/5442 Yevstigneyeva, T. L., 88M/5427 Yigitguden, H. Y., 88M/3590 Yildirim, T., 88M/1313, 4568 Yilmaz, Y., 88M/1315 Yin, J., 88M/3415 Ying, L., 88M/4242 Ying, W., 88M/2317 Yntema, J. L., 88M/0047 Yoder Jr, H. S., 88M/1260, 2266 Yoko, T., 88M/5380 Yokoyama, I., 88M/2668, 4536, 4577, 4581 Yokoyama, T., 88M/2907 Yoneda, A., 88M/0425, 3712, 3713 Yonge, C. J., 88M/3999 Yoon, R. H., 88M/2043 York, D., 88M/3187, 3216 Yoshida, T., 88M/1823 Yoshimura, J., 88M/2550 Yoshimura, K., 88M/4939 Yoshimura, T., 88M/5023 You, Z., 88M/2728 You-Dong, K., 88M/0628 Young, A. K., 88M/5939 Young, B., 88M/3152, 4632, 4802-4804, 6114, 6469, 6471 Young, C. A., 88M/2043 Young, S. D., 88M/0135 Yount, M. E., 88M/1350 Yousaf, M., 88M/3375 You Wang Song, , 88M/4783 Ypma, P. J. M., 88M/2322 Yu, C., 88M/3902 Yu, F., 88M/5823 Yu, J., 88M/5823 Yu, Y., 88M/4578 Yu, Z., 88M/5203 Yuan, T. C., 88M/5410 Yudin, E. I., 88M/3697

Yudina, G. A., 88M/4265

K., 4430 3209, 3153, 4170 5145 Yudovich, Ya. E., 88M/2308 4857

Yudovich, Yu. E., 88M/3941 Yuen, D. A., 88M/1221, 4412, 4413, 4775 Yui, S., 88M/4341 Yui, T.-F., 88M/5756 Yuretich, R. F., 88M/5840 Yurgina, Ye. K., 88M/0694 Yurimoto, H., 88M/2126 Yurkovskiy, S. A., 88M/0552 Yusta, A., 88M/3354 Yuwono, Y. S., 88M/4509 Yvon, K., 88M/1840 Zachara; J. M., 88M/0133

Zahm, A., 88M/2576 Zahnle, D., 88M/0405 Zahnle, D. L., 88M/0794 Zahnle, K., 88M/3172 Zahrt, J. D., 88M/3303 Zaikin, V. N., 88M/5728 Zainol, E., 88M/0210 Zairi, N. M., 88M/2164 Zakharov, N. D., 88M/2557 Zalasiewicz, J. A., 88M/4630 Zampini-Martin, M., 88M/4089 Zanazzi, P. F., 88M/1803, 1837, 4275 Zanchi, A., 88M/1361 Zanettin, B., 88M/2192, 4570 Zang, Q., 88M/4304, 6005 Zankl, H., 88M/3979 Zanni-Theveneau, H., 88M/0442 Zantop, H., 88M/2471 Zarayskiy, G. P., 88M/5348 Zaremba, T., 88M/0565 Zarka, A., 88M/1080 Zarnecki, J. C., 88M/5989 Zartman, R. E., 88M/0040, Zarubina, N. V., 88M/0729 Zashu, S., 88M/3850 Zaslavskiy, V. G., 88M/4953 Zasoski, R. J., 88M/5422 Zatka, V. J., 88M/0078 Zav'yalov, E. N., 88M/3521 Zaw, K., 88M/5202 Zawacki, S. J., 88M/5442 Zazubina, I. S., 88M/1038 Zech, W., 88M/0224 Zeck, H. P., 88M/0026, 6382 Zeegers, H., 88M/0902, 3853, Zeeuw, M. A. de, 88M/2450 Zefiro, L., 88M/1037 Zeitler, P. K., 88M/0041, 1597 Zeitlin, H., 88M/3877 Zelazny, L. W., 88M/1711 Zelding, N., 88M/0078 Zelichenko, Ye. N., 88M/3420 Zelinka, T., 88M/1527 Zeller, E. J., 88M/3838 Zemann, J., 88M/3123, 3444, Zeng, G., 88M/4255 Zeng, R., 88M/0450 Zeng, Y., 88M/0642 2026, 3597 Zenteno, D. J. Moran, 88M/

Zentilli, M., 88M/1927 Zeyer, J., 88M/0832 Zhai, L., 88M/4242 Zhai, M., 88M/2906, 3235 Zhang, C., 88M/1280 Zhang, F., 88M/3595 Zhang, G., 88M/1280, 3634. 5257, 5938 Zhang, G.-W., 88M/4902 Zhang, H., 88M/6195 Zhang, N., 88M/1720 Zhang, Q., 88M/0618, 3614 Zhang, R., 88M/0032, 1088, 3236, 4742 Zhang, S., 88M/2317, 3904 Zhang, W., 88M/1553 Zhang, W.-X., 88M/1543 Zhang, X., 88M/0379 Zhang, Y., 88M/2862, 3446, 4286, 5720, 6195 3232, Zhang, Y.-G., 88M/5396 Zhang, Z., 88M/0454, 2001, 2024, 2173, 2391, 5257 Zhang, Z. G., 88M/5084 Zhao, B., 88M/2062 Zhao, D., 88M/0402, 6339 Zhao, F., 88M/2391 Zhao, L., 88M/0999 Zhao, S., 88M/4502 Zharinov, S. E., 88M/5649, 6099 Zharkova, Ye. V., 88M/2200 Zhdanov, V. V., 88M/1491 Zhe-ming, N., 88M/1688 Zhen, S., 88M/3950 Zheng, K., 88M/5851 Zheng, M., 88M/1925 Zheng, S., 88M/2241, 3950. 5589 Zheng, X., 88M/2906 Zheng, Y., 88M/5120 Zhenhong, M., 88M/3439 Zhi, M., 88M/3147 Zhiguo, Mu, 88M/1627 Zhijie, Liao, 88M/1627 Zhilyaeva, V. A., 88M/3136 Zhi-neng, Y., 88M/1688 Zhorov, V. A., 88M/2384 Zhou, H., 88M/1923 Zhou, J., 88M/3570, 4169 Zhou, J.-X., 88M/0700 Zhou, P. P., 88M/0909 Zhou, X., 88M/3264 Zhou, Z., 88M/6269 Zhou, Z. Y., 88M/6004 Zhu, J. X., 88M/3625 Zhu, M., 88M/1456 Zhu, S.-H., 88M/2746 Zhu, Z., 88M/0352, 3596 Zhuang, S., 88M/6195 Zhukov, N. M., 88M/4315 Zhuk-Pochekutov, K. A., 88M/ 0620, 5575 Zhuravlev, A. Z., 88M/5648 Zhuravlev, D. Z., 88M/5648 Ziagos, J., 88M/2923 Ziborova, T. A., 88M/2657, 3767

Zielinski, R. A., 88M/0836, 4178, 6277 Zientek, M. L., 88M/6024 Zilberfarb, A., 88M/1487 Zimmerle, W., 88M/4117 Zimmermann, J. L., 88M/0695, 2225, 3231, 6167 Zinchuk, N. N., 88M/1274 Zindler, A., 88M/3972, 5691 Zingaro, R. A., 88M/5608 Zinger, T. F., 88M/5644 Zingg, A., 88M/2216

Zinner, E., 88M/2526, 4224, 4225 Zinner, E. K., 88M/4215 Ziper, C., 88M/4995 Zippert, Y., 88M/5378 Zirki, E. J., 88M/6474 Zlobin, T. K., 88M/1400 Zlotnik-Khotkevitch, A. 88M/3513 Zoback, M. D., 88M/4791 Zoback, M. L., 88M/4791

Zodrow, E. L., 88M/4043 Zolensky, M. E., 88M/2513, Zussman, J., 88M/6014 5955, 6044, 2535 Zordan, A., 88M/1578 Zornina, Yu. V., 88M/0718 Zotov, A. V., 88M/2017 Zoysa, E. G., 88M/2104 Zsoter, M., 88M/1569 Zukin, J. G., 88M/1983 Zumberge, J. E., 88M/0839 Zuniga, F. J., 88M/0234

Zuppi, G. M., 88M/5849, 5851 Zutshi, D. P., 88M/5718 Zuyev, V. V., 88M/1988 Zuzuk, F. V., 88M/5421 Zwaan, B., 88M/1130 Zwaan, P. C., 88M/2556 Zwanzig, H. V., 88M/0039 Zydorowicz, T., 88M/4651 Zykina, L. V., 88M/1779 Zymela, S., 88M/0049



SUBJECT INDEX

to *Mineralogical Abstracts*, vol. 39. Names of REGIONS are printed in capitals, subjects in lower-case roman and *Localities* in italics

Actinides, *Canada*, *Manitoba*, and minor elem. mobility in Archaean granitic batholith, 88M/1969

Actinolite v. amphibole

Acuminite, new mineral

Adamellite, *Spain, Caceres, Logrosán*, petrol., geochem, 88M/0630

Adamite, cuproadamite, England, Cumbria, Hartley Birkett, Higher Longrigg mine, occurrence, 88M/6470

ADRIATIC SEA, tr. metals in selected organisms, 88M/3630; Gulf of Trieste, nutrients in sediment pore-waters, 88M/4093

Adularia v. feldspar

Aegean Islands, Aegean Sea v. Greece

Aegirine v. pyroxene

Aerinite v. zeolite

AFGHANISTAN, major intrusive stages, typol., age, geodynamic setting, 88M/4459; E. Logar, zoned clinopyroxene phenocrysts in alkali lavas, petrogenesis, 88M/6186; Pamir and Hindu Kush, Ta in tourmalines from pegmatites, 88M/5552; Sar-e-Sang, whiteschist locality, kornerupine, implications for tourmaline-kornerupine distribn. in metamorphic rocks, 88M/6012

AFRICA, laterites, climate, palaeoclimatic inferences from distribn., min. compn. of, 88M/6333; mining, (book), 88M/0088; E, colour-changing chromiferous tourmalines, anals., 88M/5504; large faceted enstatite, gemmological study, 88M/5508; Nd, Sr isotopic compns. of carbonatites, implications for mantle heterogeneity, 88M/0719; E African Rift system, massive sulphide deposits of hydrothermal origin, 88M/3545; beneath W branch of E African rift, regional K-metasomatism in mantle, alkali clinopyroxenite xenoliths in highly potassic magmas, 88M/2776; southern, Archaean Au mineralization and komatiites, 88M/0332; Archaean, Late Proterozoic to fine-grained sediments, Palaeozoic geochem. characteristics, significance for evolution of continental crust, 88M/4030; Au distribn. in Archaean granitic rocks and supracrustal rocks, comparison, 88M/0311; computer-aided evaluation of cement raw materials, case study, 88M/1943; diversion of heat by Archaean cratons, model, 88M/4776; evolution of continental crust. 88M/0591; harzburgites with garnets of diamond facies from kimberlites, 88M/2767; high-, low-T garnet peridotite xenoliths, poss. relation to lithosphereasthenosphere boundary beneath, 88M/2760; modern, ancient geotherms beneath, 88M/6453; N isotopic evology, implications for envtl. and dietary tracing, 88M/1962; Proterozoic oceanic crust and geology of subcontinental mantle, eclogites and related rocks, 88M/5533; Sr, Nd isotopic, REE evidence for genesis of megacrysts in kimberlites, 88M/2780; SW, basement intrusive rocks, geochronol. study, 88M/1623; SW Africa/Namibia, Brandberg granite, tin mineralization assoc, with, 88M/3945; W, biogeochem cycles of elems. in diff, ecosystems of natural vegetation. 88M/4094; late Proterozoic glaciation, Rb/Sr dating, 88M/1621; W Africa platform, REE, ENd of 40-70 m.v. old fish debris, African-Arabian Cainozoic volcanism assoc. with swells, rifts, 88M/2748; Barberton Mountainland, early Archaean greenstone belt evolution, U/Pb zircon ages, 88M/0025; Calabar Flank of Niger Delta, clay min. burial diagenesis, case study, 88M/0177; Cameroon line, comparison between oceanic and continental alkaline volcanism, 88M/2794; Damara orogen, metallogeny, 88M/3896; Damara Province, Brandberg complex, fossil hot spring system, 88M/6366; Kaapvaal, lithosphere, compn., struct., 88M/1208; Koras-Sinclair-Ghanzi rift, volcanism, sedimentation, age relationships, geophys. signature of late middle Proterozoic rift system, 88M/6122; Krantzberg, W deposit, alterationmineralization, 88M/6367; Mauritanide, Bassaride. and Rokelide orogens, geodynamic 88M/3174; evolution, Mayombian belt, metabasites, geochem., evolutionary model, 88M/1386; Mgeni Estuary, sedimentary envts., facies, 88M/6334; Namaqualand metamorphic complex, Achab gneiss, poss. basement, 88M/1483; Namagua province, central Bushmanland group, amphibolites, compn., age, tectonic setting, 88M/0803; Niger Delta, envtl., diagenetic implications for REE geochem. of sediments, 88M/4028; Ousis, tin-bearing granite, precursor magma of Uis pegmatite, 88M/4497; Pan-African belt, E. Hoggar block, crystallization age, 88M/0022; sub-Sahara, management of soils, 88M/1589; Senegal Basin, Cretaceous shales, min. study, 88M/0178; Senegal River, annual discharge of dissolved material, 88M/4096; water budget, monthly,

yearly discharge of particulate matter, 88M/4095

Agate v. quartz

Age determination, application of Xe isotopes for dating pitchblende, 88M/3192; astronomical cycles for measuring geol. time, 88M/3183; chronometric calibration of comparative time scale for Mesozoic, Palaeozoic, 88M/4861; measurement of geol. time and geol. time scale, 88M/3181; mix-isochron, significance in isotopic chronol., 88M/3184; precise timing of last interglacial, mass spectrometric detn. of ²³⁰Th in corals, 88M/0048; SEM method for rock-varnish dating, 88M/3198; trends, transitions, events in cryptozoic history, calibration, recommendations by Subcommission on Precambrian Stratigr., 98M/3182

38M/3182

⁴⁰Ar/³⁹Ar dating, Ar diffusion in partially outgassed alkali feldspar, 88M/0041; basic lunar rocks, 88M/5948; biotites, evidence from hydrothermal degassing expts., TEM studies, 88M/3193; calibration of interlab. standard, MMhb-1, 88M/3189; cleavage formation in tuffs during anchizonal metamorphism, 88M/4862; derivation of age spectra of single hornblende, biotite grains by laser step-heating, 88M/3187; multiple trapped Ar isotope components revealed by isochron anal., 88M/4863; significance of age spectra of whole-rock and constituent grain-size fractions from anchizonals, 88M/3191; propagation of error, choice of standard in, 88M/3185; Western Australia, E. Pilbara, Archaean granite greenstone terrain, metamorphic history, 88M/1639; Canada, Nova Scotia, Meguma zone, intrusive rocks, thermal history, 88M/3244; China, Qingyuan granite-greenstone terrain, application to formation time, 88M/3235; France, Massif Central, Neschers, Quaternary pumice, defeat of xenocrystic contamination, 88M/3209; Germany, E. Eifel volcanic field, Quaternary tephra, 88M/3216; Gulf of Mexico, pre-Mesozoic basement. metamorphic implications, 88M/4917; E. Indian craton, incremental heating study of min. separates, Early Archaean, implications for thermal history, 88M/3230; Ireland, Mourne Mts., revised age for granite, 88M/0008; Japan, Sanbagawa, Mesozoic high-P metamorphism, 88M/1633; Norway, Steinkjer. Ytterøy and Lerkehaug, ages of lamprophyre

dykes, 88M/0004; Wales, Anglesey, Penmynydd schists, age of blueschist metamorphism, 88M/0007

— —, ⁴¹Ca dating, terrestrial materials, prospects for dating Pleistocene samples, 88M/0047

- —, dendrochronology, *Ireland*, oak tree rings, age corresponds with dates of Santorini and volcanic dust veils, 88M/4884
- —, electron spin resonance dating, tooth enamel, 88M/0049
- -, fission track dating, calibration of Fish Canyon Tuff standard in French reactors, 88M/3253; meteorites, 88M/4229; Australia, New South Wales, The Crescent, gabbro, 88M/1635; Northern Territory, E. Alligator River Terrain, Proterozoic, thermal history, 88M/3240; Canada, Haughton, astrobleme and included biota, 88M/1653; Nova Scotia, Meguma zone, intrusive rocks, thermal history, 88M/3244; Egypt, Eastern Desert, cooling history of Silurian to Cretaceous alkaline ring complexes, 88M/0020; Italy, Sesia-Lanzo zone, Monte Mucrone, eclogites, Alpine cooling history, 88M/1611; Japan, Hokkaido, Oshima Peninsula, Cainozoic volcanic rocks, tuffs, 88M/1628; Kenya, Bakata fm., Buluk Member, tuffs, suitable fission-track age standard, 88M/4893
- -, K/Ar dating, examination of proposed standards, 88M/3190; Precambrian mafic dyke swarms, 88M/4864; sediment fine fractions, comparison with Rb/Sr dating, to date young diagenetic events, 88M/3985; E. Alps, dating fault gouges, 88M/0016; S. Atlantic, Gough Is., volcanism, revised stratigr., 88M/4895; Bolivia, Andes, E Cordillera, delimitation of cryptic Eocene tectono-thermal domain, 88M/0046; Carpathians, Pieniny Klippen belt, Miocene andesite intrusions, 88M/0017; China, Yunnan Province, Tengchong, volcanic rocks, 88M/1627; Corsica, Monte Cinto group, igneous rocks, 88M/1609; Czechoslovakia, W. Carpathian crystalline complex, isochron reassessment of, 88M/1618; NW Europe, diagenetic clay mins., evidence for Jurassic thermal anomaly, 88M/0010; France, Hautes-Alpes, Grès du Champsaur fm., andesite pebbles from conglomerates, 88M/2970; Germany, Rheinisches Schiefergebirge, metapelites and intercalated metatuffs within anchizonal terrain, 88M/1617; Italy, S Alps, Brixen quartz phyllite, evidence for Ar loss at low T, 88M/0015; Sardinia, Arcuentu, calc-alkaline volcanic complex, 88M/0014; Val d'Ayas, Brusson, gold-quartz veins, evidence of mid-Oligocene hydrothermal activity, 88M/1610; Japan, Gifu pref., Sakashita-cho and Takayama-shi, basalt, 88M/1629; Hokkaido, Futamata and Tomuraushi, granitic inclusions from pyroclastic flow deposits, 88M/3238; Sanru and Koryu mines, 88M/3237; Kyushu, Hohi geothermal area, volcanic rocks, 88M/1630; Tungsten Province, base, precious metal mineralization, 88M/1631; Kenya, Gregory Rift Valley, Kedong-Naivasha-Kinangop region, stratigr., geochronol., volcano-

tectonic evolution, 88M/3224; Lake Turkana, volcanic rocks, 88M/3223; Mexico, Trans-Mexican Volcanic Belt, age, evolution, 88M/0043; Pacific Ocean, New Hebrides back-arc troughs, volcanic rocks, 88M/3243; Poland, use of new decay constants to re-compute dates, 88M/0019; Portugal, Avô granitic pluton, 88M/0012; Scotland, Moine Thrust Zone, relationship between ages, mica grain-sizes, movement, 88M/3204; Sinai Peninsula, Ataga area, whole-rock ages reset during Pan African event, 88M/3228; Spain, Sierra de Gata, calc-alkaline volcanic rocks, 88M/1606; Switzerland, Aar massif, Susten-Pass area, gneiss, Hercynian min. paragenesis, overprint by Alpine metamorphism, deformation, 88M/1608; S. Tibet, plutonic belts, time relationships magmatism, tectonics, metamorphism, 88M/3231

— —, O isotope dating, *Australia*, regolith, 88M/3239

— —, ²¹⁰Pb dating, lake sediments, ombrotrophic peats, by gamma-assay, 88M/4865

— —, Pb isotopic dating, Germany, Sangerhäuser Mulde, Cu-shale, age of mineralization, 88M/0632

— —, Pb/Pb dating, Western Australia, Yilgarn Block, Archaean post-kinematic granitic intrusions, 88M/4906; Canada, North West Territories, Portman lake area, 88M/3247; Taiwan, young marbles, 88M/4903

----, radiocarbon dating, field study on initial ¹⁴C content as limiting factor in groundwater dating, 88M/5852; N. Atlantic, accelerator mass spectrometry, retreat velocity of polar front during last deglaciation, 88M/0002; Australia, desert dunes, 88M/1638; Queensland, Fraser Is., Triangle Cliff, history of coastal dunes, 88M/1636; Canada, Geol. Survey laboratory, apparatus, techniques, review, 88M/1640; coastal Iran, Greece, Jordan, deformation chronol., 88M/0027; New Zealand, archaeology, 88M/4908; Oruanui eruption, 88M/4909; E. Pyrenees, thermal waters, 88M/0011; USA, Hawaii, 88M/1656

-, Rb/Sr dating, fluid migration in hydrocarbon source rocks, 88M/3986; linear correlation between pairs of isochron ages from coexisting metamorphic micas, 88M/3186; sediment fine fractions, comparison with K/Ar dating, to date young diagenetic events, 88M/3985; Precambrian mafic dyke swarms, 88M/4864; W. Africa, late Proterozoic glaciation, 88M/1621; Western Australia, Mt. Mulgine, granitic rocks, 88M/1634; Austria, Bohemian massif, Moldanubian zone, granites, 88M/1614; Gurktal nappe, 88M/1616; Brazil, Bahia, Lagoa Real, granitic basement, hydrothermal albitites, U mineralization, 88M/4918; Newfoundland, La Poile Bay area, Georges Brook fm., volcanic rocks, 88M/1644; Ontario, Parry Sound, Nobel and McKellar gneisses, 88M/1647; Quebec, Cape Smith Belt, granodiorite-tonalite

88M/1646; N of Cape Smith fold ber Proterozoic to early Archaean rock 88M/0036; Chile, late Palaeozoic granit rocks, 88M/1658; China, Shanghaihuan polyphase granitic gneiss, 88M/0032 Yinshan Mts., Precambrian metamorphi 88M/3233; Czechoslovakia Stráovské vrchy Mts., granitic rocks 88M/1619; Egypt, Ras Gharib segment of N Nubian Shield, geochronol. evolution Germany, orthogneiss 88M/4898; 88M/3218; Greenland, Caledonian following belt, Upper Eleonore Bay group and Cambrian metasediments, 88M/4872 Ireland, Connemara, Oughterard granite 88M/3207; Mourne Mts., granites, young ages, 88M/0009; Nigeria, Lokoja, schists in metasedimentary belts, implications fo Precambrian evolution, 88M/3221; Norway Helgeland nappe complex, Mosjøen unit timing of tectonometamorphic events 88M/0003; Nord-Trøndelag, Bindal Massif intrusive rocks, 88M/1600; Portugal Trás-os-Montes, Macedo de Cavaleiro. area, peralkaline acidic volcanic rocks 88M/4612; central Pyrenees, Aston massif 88M/3212; Saudi Arabia, Arabian Shield Wadi Shuqub quadrangle, plutonic rocks 88M/1626; Spain, Catalonia, Montnègre pluton, comparison with Hercynian granites from Pyrenees, Sardinia, Corsica 88M/3215; Galicia, granite, 88M/3213 Morille-Martinamor, plutonic, metamorphic rocks, 88M/3214; Sweden, Göteborg region granitic plutons, 88M/3201; USA, Alabama Farmville granite, 88M/4531

-—, Sm/Nd dating, Precambrian mafic dykleswarms, 88M/4864; Western Australia Pilbara Block, Talga-Talga subgroup Archaean, early evolution of mantle 88M/4907; E and S Mexico, Precambrian crust formation, metamorphism, 88M/0044 Scandinavia, Seve nappes, isotopic evidence for Precambrian provenance, Caledonian metamorphism of paragneisses, 88M/4876 USSR, Ukrainian shield and Omolon massif

Early Precambrian rocks, 88M/0029 -, thermoluminescence dating, summary of exptl. method for dating soil, flint pottery, 88M/1595; volcanic rocks and alteration mins., application to geotherma history, 88M/1632; Australia, desert dunes 88M/1638; South Australia, Mt Schank volcanic eruption, 88M/1637; Canada Hudson Bay Lowland, Quaternary raise marine sediments, 88M/4913; China Zhaitang, Malan loess, 88M/0031; Israel Mousterian 'Proto-Cro-Magnon' remains origin of modern man, 88M/3227; central Sweden, æolian sediments, 88M/3200; USA Alaska, Fairbanks, Old Crow tephra, an loess, Pleistocene, 88M/3248; Lowe Mississippi Valley, loess, stratigr geochem., 88M/4916

- —, ²³²Th/²²⁸Ra dating, newly formed mins in geothermal fields, check on min. c known age, implications for fluid-roc

interactions, 88M/1613

——, ²³⁰Th/²³⁴U dating, *Belgium*, *Lièg province*, *Remouchamps*, tephra, nev Pleistocene stratigraphic marker, 88M/4549

Pacific Ocean, Rurutu, marine notches in limestone cliffs, uplift rate, 88M/3242

—, U-series dating, bones, 88M/1596; Italy, Sicily, SW flank of Mt. Etna, travertines,

-, U/Pb dating, improved micro-capsule for zircon dissolution in, 88M/3194; precise ages of diabase dykes, mafic-ultramafic rocks, using tr. amounts of baddelevite. zircon, 88M/4912; precise dating of zircon at sub-nanogram Pb level, 88M/3196; synthesis, purification of ²⁰⁵Pb for, 88M/3195; zircons, basic examination of error propagation, 88M/3197; Africa, Barberton Mountainland, early Archaean greenstone belt evolution, 88M/0025; South Australia, Flinders Ranges, evidence for late Precambrian Acraman ejecta blanket, 88M/4905; Belgium, Quenast neck, Lessines sill, geochronol., isotopic geochem., implications for age of Brabant Massif. 88M/3208; N. Cameroon, Precambrian rocks, orogenic evolution, chronol. of Pan-African belt, 88M/1620; Canada, British Columbia, Barkerville terrain, granitic orthogneiss, 88M/1654; Lynn Lake and Rusty Lake metavolcanic belts, two ages of Proterozoic magmatism, 88M/0039; Newfoundland, Coney Head complex, 88M/0035; Mansfield Cove complex, Buchans, Roberts Arm, and Victoria Lake groups, 88M/1643; North West Territories, Dist. of Keewatin, Amer Lake map area, dacite porphyry, 88M/1652; Dist. of Keewatin, Amer Lake map area, quartz syenite intrusion, 88M/1651; Nova Scotia, Cape Breton Highlands, Grenvillian basement, 88M/0037; Ontario. Michipicoten greenstone belt, Jubilee stock, 88M/1648; Yukon and British Columbia, N. Cassiar terrain, 2200 m.y. age of zircons in Upper Proterozoic clastic rocks, 88M/3246; Shield, Winnipeg Canadian subprovince, differential response of U-Pb systems in coexisting accessory mins., implications for Archaean crustal growth, stabilization, 88M/4914; Central African Republic, evidence for Pan-African granulite facies metamorphism, 88M/0024; China, Henan Province, late Archaean greenstone-gneiss terrain, age, tectonic setting, 88M/4902; Finland, Lapinlahti-Varpaisjärvi area, Archaean basement, 88M/1601; Lylyvaara, Archaean migmatitic gneiss, 88M/0006; France, Alps, Chamrousse ophiolite complex, 496 m.y. age of plagiogranites, evidence of Lower 88M/4886; Palaeozoic oceanization, Variscan leucogranites, Limousin, Saint-Alyre-ès-Montagne, 88M/4885; orthogneiss, 88M/3210; Germany, Bavaria, Hercynian events, 88M/3217; Greenland, Isukasia, mins. from gneiss complex, 88M/1598; Scoresby Sund region, belt, 88M/4870; fold Caledonian Caledonian plutonic rocks, 88M/4869; Ireland, Mayo, Annagh Division gneisses granite, Precambrian, Termon 88M/1603; Mexico, Baja California, Vizcaino Peninsula, granitic clasts in Mesozoic arc-derived strata, 88M/0042;

Norway, Caledonides, ophiolites and arc-related plutons, 88M/4874; Portugal, Tourem, age of migmatization, 88M/0013; Saudia Arabia, Precambrian ophiolites, geol. settings, Pb-isotope characteristics, implications for continental accretion, 88M/4896; Scandinavia, Seve nappes, isotopic evidence for Precambrian provenance, Caledonian metamorphism of paragneisses, 88M/4876; Scotland. Aberdeen, granite, isotopic, structl. age of, 88M/4880; South Africa, Bushveld complex, Nebo granite, implications of new age, 88M/4894; Johannesburg-Pretoria granite dome, Archaean tonalitic gneiss, 88M/1624; Spain, Galicia, Sisargas, orthogneiss, new evidence of Precambrian basement, 88M/1605; Sweden, Göteborg region, granitic plutons, 88M/3201; Grums, granitic rocks in banded sequence, 88M/3202; N. Sweden, implications for early Proterozoic crustal accretion, 88M/4875; W. border of Archaean province of Baltic Shield, 88M/0005; USA, Alabama, northern piedmont, granitic rocks, 88M/4530; Arkansas, Potash Sulfur Springs igneous complex, large zircon crystals, 88M/4430; Carolina slate belt, metavolcanic rocks, 88M/3251; Connecticut, Avalon terrain, geol. evidence for Late Palaeozoic anatexis, deformation, accretion, 88M/1655; USSR, Urals, alkali rocks, 88M/4899

SUBJECT INDEX

-, U/Th/He dating, apatite, potential thermochronometer, 88M/1597

-, U/Th/Pb dating, ion microprobe, lower crust, 88M/4904; USA, New England, Highlandcroft plutonic suite, 88M/0040

Aggregates, polycrystalline, 3-D kinematic model of fabric development in, comparisons with exptl. and natural examples, 88M/2727

Aikinite, phase relations in system Cu₂S-PbS-Bi₂S₃, Ag₂S-PbS-Bi₂S₃, 88M/2045; Portugal, Aljustrel, occurrence, 88M/5196

Akaganéite, England, Norfolk, occurrence in Recent oxidized carbonate concretions in reduced intertidal, sandflat sediments, 88M/2620

Alacrinite, Germany, Black Forest, Wittichen, occurrence, 88M/3163

Albite v. feldspar

Albitite, Brazil, Bahia, Lagoa Real, hydrothermal, U/Pb, Rb/Sr, Sm/Nd chronol., 88M/4918; Morocco, W. High Atlas, baryte deposits in, 88M/0396; Sinai, Tarr, metasomatic plagiogranite from mainly non-intrusive protoliths, 88M/2944

Alexandrite v. chrysoberyl

ALGERIA. Ahaggar, In'Ouzzal nucleus, Archaean, new carbonatite complexes, min., geochem. data, 88M/5637; 'Taourirts' granites, geochem. study of concentration process of W, Sn in, 88M/2227; Ain Barbar, polymetallic ore veins, min. compn., fluid phase evolution, 88M/5586; Bougaroun Cape ultramafic body, petrol., 88M/2842; Hoggar, collision-related plutonism, structl. aspects, 88M/1253; Hoggar, Laouni layered intrusion, zirconolite, baddeleyite, in basic cumulates, new natural occurrence, 88M/1036; W. Laouni mafic intrusion, NaTi- Zr- H₂O-rich min. inclusions indicating post-cumulus Cr-spinel dissolution, recrystallization, 88M/6051; pseudobrookite inclusions in Cr-spinel, 88M/1021; Central Sahara, cratonic oolitic ironstone deposits, metallogenesis, 88M/3543

Aliettite, natural and monoionic, hydration, dehydration states, 88M/0112

Aliphatic acid anions, distribn., occurrence in deep subsurface waters, 88M/2419

Alkaline complex, India, Rajasthan, Mundwara, clustering as aid to evaluation of mode of genesis of, 88M/4500

Alkaline magma v. magma, alkaline

- rocks, and inclusions, window on Earth's interior, 88M/2784; review, 88M/4462; India, Andhra Pradesh, Elchuru pluton, petrol., 88M/6189; Turkey, Bayindir-Akpinar area, geochem., genetic interpn., 88M/4485; USA, Texas, Trans-Pecos, of contrasting tectonic settings, 88M/4436; USSR, Urals, U/Pb dating, 88M/4899

Alkanes v. hydrocarbons

Allactite, Sweden, Nordmark, assoc. with armangite, 88M/4323

Allanite v. epidote

Allophane, synthesis, reactions between silicic acid and Al ions in dilute aqueous solutions, 88M/4984; New Zealand, North Island, in soils, 88M/5056; South Island, in yellow-brown shallow and stony soils, high country, upland yellow-brown earths, 88M/5057; USA, Hawaii, in soils, implications for classification, 88M/5060

Alluaudite, USA, Colorado, Crystal Mountain dist., in pegmatites, 88M/4834

Almandine v. garnet

Alnöite, ion microprobe detn. of REE in perovskite from, 88M/5564

ALPS, review of historical development of research work, 88M/3061; very low-grade metamorphism, review, 88M/3057; E, dating fault gouges, 88M/0016; Mesozoic ophiolites, review, 88M/2938; superposed deformations, strain anal., microfabrics, 88M/1159; Alpine high-P metamorphism, 88M/3074; C, O isotopes in iron carbonates, 88M/2141; S, gradual C isotope shift at Permian-Triassic boundary, 88M/4021; S. Alpine domain, Lugano rocks, Nr-Sr isotopic characteristics, constraints on continental crust formation, 88M/0709; W, metamorphism, unsolved problems. 88M/3058; high-P, zoneography of metapelites. chronol.. consequences, 88M/3060; significance of aragonite occurrences, 88M/6395; Adula basement nappe, tectonometamorphic evolution, 88M/3072; Alpine 'Root Zone', textures, c-axis orientations of deformed quartz crystals from porphyritic dykes, 88M/4718; Central Alpine 'root zone', calcite mylonites, 88M/1473; Felbertal, scheelite deposit, S isotope studies, 88M/3892; Franco-Italian, thermomin. waters, isotopic characterization, 88M/5849; Haute-Maurienne, ardennite, crystal chem., lattice parameters, 88M/4247; Monte Rosa, magnesiochloritoid from high-P assemblage, crystal struct. at 25 and 700°C, 88M/5092; Montgenèvre ophiolite, gabbro, volcanic rocks, comparative major, tr. elem. geochem., 88M/2211; Sesia garnet-chloritoid equilibria in eclogitic pelitic rocks, bearing on phase relations in high P metapelites, 88M/6397; Sesia-Lanzo zone, eclogites, microstructl. 88M/4713; Window, Tauern heterogeneities, hornblende stability in interlayered graphitic and nongraphitic schists, 88M/1472; Tosa-Ticino region, of plagioclases, anorthite contents 88M/2596

Alstonite, USA, Illinois, occurrence, fluorescence of, 88M/6480; Hardin County, Harris Creek fluorspar dist., occurrence, 88M/6479

Altaite, β-lead telluride, XRD powder data, 88M/4316

Alum minerals, USA, Wyoming, report, 88M/1950

Aluminium, effect of Fe on nature of precipitation products of, 88M/0502; impact of atmospheric aerosols on tr. metal chem. in open ocean surface sea-water, 88M/2396; oxides and alumina, fluoride interactions with, 88M/2038; solubility controls in acid waters, 88M/5382

— compounds, oxide, B, Si adsorption on, 88M/4996; hydroxides, rehydration of, application to equilibrium studies of boehmite/bayerite, 88M/2037; solubility in aqueous solutions containing fluoride ions at 50°C, 88M/0494; solubility in water at 80°C, 88M/2010

— industry, *Poland*, study on kaolin chlorination process for, 88M/5006

-- isotopes, ²⁶Al, measurement, applications, 88M/5935

Aluminophosphate, time-of-flight neutron powder diffraction study, 88M/1839

Aluminosilicate gels, co-precipitated, IR and ²⁷Al NMR-MAS behaviours of, 88M/0442; diphasic, phase transformation, 88M/5381

- melts v. melts, aluminosilicate

Aluminosilicates, cementation mechanism, to form hardpan, 88M/2176; distribn. of iron in, Mössbauer spectroscopy, 88M/3468; influence of Al on acidity of, 88M/3685; monolayer, synthesis, characterization of hollow spherical form of, 88M/4975

Alunite, ammonium in, ammonioalunite, new min., 88M/6084; synthesis of, 88M/5434; Jordan, occurrence, 88M/1749; USA, Wyoming, occurrence, 88M/1950

Alunogen, Czechoslovakia, Niná Myšľa, occurrence, anals., 88M/1056; Greece, Peloponnesus, Katakolo area, from mud volcano, chem. anals., geochem. behaviour, 88M/1057

Amazonite v. feldspar

Amber, fossil, gas bubbles in, as poss. indicators of major gas compn. of ancient air, 88M/5548, 88M/5549; gemstone, descrptn., 88M/0586; Germany, Bitterfeld, Lower Miocene, descriptn., 88M/0588; Poland, Chiapowo, in Eocene sediments, min.-petrogr. characteristics, 88M/2978; in Palaeogene sediments, origin, 88M/2979; Możdżanowo, in Tertiary sediments, 88M/2977

—, gedanite, Germany, Bitterfeld, in amber,

Amblygonite-montebrasite, optics, 88M/1079 Amethyst v. quartz

Amino-acids, Caspian Sea, in sediment cores, 88M/4139

Ammonioalunite, new mineral

Ammonium, USA, Potomac River and estuary, in sediments, 88M/1979

Amphibole, amphibole effect. mechanism for triggering explosive eruptions, 88M/2885; cation clustering, segregation in, 88M/4258; Fortran program for tabulating, naming of anals., according to IMA scheme, 88M/2568; sub-solidus dehydration of, in andesitic magma, 88M/6022; Australia, Queensland, McBride Province, origin in ultramafic, mafic xenoliths, 88M/1282; Canada, Quebec, Monteregian and White Mtn. alkaline suites, chem., 88M/2571: comparative Czechoslovakia, Nízke Tatry Mts. crystalline complex, simple model of paragneiss and amphibole rock protoliths, 88M/6405; NE Egypt, crystallization, implications for magma evolution, 88M/4259; France, Brittany, R. Vilaine estuary, controls on P-T-t deformation path from amphibole zonation during progressive metamorphism of basic rocks, 88M/6387; Vilaine, progressive changes in min. assemblages in metamorphic phases, 88M/2569; Massif Central, Rouergue area, Alvi-rich, in eclogite, 88M/0992; Greece, Parnon massif, zoned, from metabasites, geothermo-barometry, 88M/6402; Serbo-Macedonian Massif, chem. as P, T indicator in amphibolites, 88M/2570; Xanthi. Rhodope crystalline complex, amphibolitized eclogites, 88M/4725; India, Madhya Pradesh, Bijawar group, banded garnet, geochem., envtl. significance, 88M/0807; Sausar Group, amphibole-bearing assemblages in Mn silicate rocks, petrol., 88M/2572; Italy, W. Alps, coexisting, in eclogite, constraints on miscibility gap between sodic, calcic amphiboles, 88M/6023; USA, California, Franciscan Cazadero, from glaucophane type facies metabasites, parageneses, compns., 88M/0993; Montana, Stillwater complex, primary postcumulus, within olivine cumulate, compn. of, 88M/6024

—, actinolite, *Canada*, *Quebec*, *Gatineau*, from skarn, chem. compn., 88M/6075

—, — -albite rocks, Finland, Outokumpu dist., tectonized, field, geochem. evidence for mafic extrusive origin, 88M/3044

—, anthophyllite-bearing rocks, Canada, Manitoba, Flin Flon–Sherridon area, 88M/3117

—, arfvedsonite, *Yugoslavia*, *Alinici*, in hydrothermal veins, 88M/6077

—, C2/m, positional disorder of A-site cation in, model energy calculations, probability studies, 88M/1798

—, gedrite, Western Australia, Errabiddy, and kyanite, in gneisses, corona textures between, 88M/3105; Sweden, W. Bergslagen, Gåsborn area, in hydrothermal vein, 88M/4257; USA, Georgia, Blue Ridge in amphibolite, 88M/4757

 –, glaucophane, Japan, glaucophanitic rocks two geol. types of, 88M/4746

—, hastingsite, Cl-rich K-, Antarctica Lützow-Holm Bay, West Ongul Is., anals 88M/0994

—, hornblende, Ar retentivity of, field expts 88M/3188; correlation of Al in, with P or solidification of cale-alkaline plutons 88M/0991, comment, 88M/2877; impact of hornblende crystallization for genesis of cale-alkalic andesite, 88M/1215; metae extraction by use of melted ammonium sulphate, 88M/5475; -plagioclase-garnes assemblages, tremolite and H₂O activity attending metamorphism of, 88M/5471; h. Alps, Tauern Window, stability in interlayered graphitic and nongraphitic schists, 88M/1472; USA, Georgia, Blue-Ridge, in amphibolite, 88M/4757

 indium-fluor-eckermannite, synthetics characterization of cation ordering by Rietveld struct. refinement, 88M/1799

—, kaersutite, *Indian Ocean, Funk Seamount*, in volcanic rocks, 88M/6292

---, nephrite, deposits, *Taiwan*, study, 88M/5509; *Taiwan*, *Fengtien*, stable isotope studies, 88M/5756

—, orthoamphibole, *Greenland*, iridescent, new gem material, 88M/0583

—, oxyhornblende, pyroxene lamellae in, high resolution electron microscopic observation, 88M/2574

—, pargasite, synthetic, characterization, 88M/0252; USA, SW Maine, in skarns, 88M/4826

—, richterite, *Thorsmörk, S Iceland*, in alkaline granophyric xenolith, 88M/2814

—, riebeckite, Finland, Honkamäki—Otanmäki region, Pikkukallio, in alkali gneiss, 88M/2561

--, sadanagaite, USSR, Ilmen Mts., from alkaline complex, 88M/4260

—, scandium-fluor-eckermannite, synthetic, characterization of cation ordering by Rietveld struct. refinement, 88M/1799

-, tremolite, activity attending metamorphism of hornblende-plagioclase-garnet assemblages, 88M/5471; and talc, phlogopite, F-OH substitution in, 88M/6021; effect of oxalate on dissolution rates, 88M/2008; kinetics of intracrystalline order-disorder reactions in, 88M/5470; synthesis. characterization, in system H2O-CaO-MgO-SiO₂, 88M/0556; Namibia, Damara orogen, and talc, reverse age relations of, deduced from reaction textures in metamorphosed siliceous dolomites, 88M/6410; Switzerland, Campolungo, veins, genesis, 88M/3022

Amphibolite, discriminant function anal., 88M/5745; reactions with aqueous solutions at 250°C, 88M/3697; Africa, Namaqua province, central Bushmanland group, compn., age, tectonic setting, 88M/0803; Australia, Arunta Inlier, Entia Gneiss complex, geochem. evidence for Proterozoic transition from extensional to compressional tectonics, 88M/6416; Canada, Manitoba, Bernic Lake, Tanco, alteration of

amphibolitic wallrocks around REE 88M/4068; Czechoslovakia. Slovenské Rudohorie Mts., Hladomorna Valley fm., and metagabbro, Rochovce, borehole KV-3, comparative min.-petrogr. characteristics, 88M/6403; France, Massif Central, Velay, granulite/amphibolite facies transition, 88M/1471; Greece, Serbo-Macedonian Massif, amphibole chem. as P, T indicator in, 88M/2570; India, W. coast, inner shelf off Bhatkal, ortho-, occurrence, 88M/4729; Pakistan, Kohistan arc. geochem., 88M/4062; Swat, petrol., and development of 'Lesser Himalayan' basin, 88M/4061; Spain, Arinteiro, and marble. metamorphic interactions, 88M/4715; USA, Colorado, early Proterozoic, geochem., petrogenesis, 88M/6429; Georgia, Blue Ridge, petrol., 88M/4757; Massachusetts, Monson Gneiss and Ammonoosuc and Partridge Volcanics, comparative petrol., 88M/4756; South Dakota, Black Hills. Edison pegmatite, holmquistite-bearing, pegmatite-wallrock interaction, 88M/6025; USSR, Kolar goldfield, tr.-elem. distribn, in country rocks, 88M/2354

Amstallite, Austria, Amstall, new min., descriptn., crystal struct., 88M/1082

Analcite (analcime) v. zeolite

Analcitite, France, Hérault, Lodève, with abundant phlogopite megacrysts, descriptn., 88M/1235

Analytical techniques, for geol. and inorganic materials, review, 88M/4940

Anatase, TiO₂-rutile, mode of existence, abundance, exptl. study, 88M/0523; *Italy, Latium*, occurrence, 88M/1576; *Sardinia, Olmedo*, in bauxite deposits, 88M/1937; *Norwegian Sea*, diagenesis of titaniferous mins. in Jurassic sandstones, 88M/6313; *Pacific, Tahiti*, in podzols, 88M/3422; *Poland*, in clay rocks, 88M/0175; *USA, California, Salton Sea geothermal field*, authigenic, in shales, 88M/2612

Ancylite, calcio-ancylite, USA, North Carolina, Foote mine, occurrence, anals., 88M/2655

Andalusite, Al-chlorite as hydration reaction product of, new occurrence, 88M/6035; produced by base-cation leaching, contact metamorphism of felsic igneous rocks, andalusite + K-feldspar + water, growth kinetics, mechanism, 88M/5393; Australia, Cooma complex, porphyroblasts, sequential growth, microstructl. evidence of prograde reaction, 88M/6415; Germany, East Eifel, Wehr volcano, in schist xenolith, compn., melting relationships, 88M/4245; South Africa, prepn., certification of ref. material, 88M/5940; Sweden, W. Bergslagen, Gåsborn area, in hydrothermal vein, 88M/4257

Andersonite, crystal chem., 88M/2648

ANDES, new Nazca plate reconstructions, implications for intermontane basin evolution in, 88M/6495; central, metallogenic belts, 88M/5245; S Volcanic Zone, poss. contribn. of asthenosphere, below subducted oceanic lithosphere, to

genesis of arc magmas, 88M/2283; v. also Bolivia, Chile, Peru

Andesine v. feldspar

Andesite, Czechoslovakia, Pukanec region, Sitno effusive complex, nontronite, weathering product of, 88M/1750; Japanese island arc, xenoliths in, 88M/2755; E. Pacific Rise, from 3400m depth, tridymite, cristobalite in, 88M/2909; USSR, S. Koryakia, Komandorsky basin, Cainozoic, origin of, geochem., exptl. data, 88M/0458; Kurile Island arc, petrochem. variations of, 88M/5649; Yugoslavia, Croatia, Baranja, and pyroclastics, petrogr., geochem., 88M/6242

—, calc-alkaline, impact of hornblende crystallization for genesis of, 88M/1215; Aleutian volcanic arc, Cold Bay volcanic centre, fractionation, mixing mechanism in genesis, 88M/6206

— flows, Costa Rica, Arenal Volcano, xenoliths in, inference of lower crust compn., 88M/1367

Andesitic magma v. magma, andesitic

Andorite, tin-bearing phase, Ag_{1.2}Sn_{0.9}Sb₃S₆, 88M/2046

Andradite v. garnet

ANGOLA, *mouth of Congo*, elem. migration, min. genesis, 88M/2305

Anhydrite, from iron-ore deposit, REE in, 88M/0620; synthetic anhydrite-halite mylonites, textural evolution, 88M/2047; Zechstein, ¹⁸O/¹⁶O, ²H/¹H changes during progressive hydration of, 88M/4011; Belgium, Ginant synclinorium, Yves Gomezée, calcareous, silicious pseudomorphs of, 88M/4642; Hainaut, Saint-Ghislain, from drill hole, tr. elem., micro-min. compn., 88M/4017; Chile, El Teniente and Rio Blanco porphyry Cu deposits, O, S isotopic compns., 88M/2142; France and Belgium, isotopic geochem., 88M/4018; Germany, Württemberg, Nagold, in Triassic Middle Muschelkalk, mineralogy of borehole samples, 88M/4648; Netherlands, South Limburg, Heugem, and Belgium, St-Ghislain, and calcite pseudomorphs after anhydrite from Viséan rocks, Sr isotopic anal., 88M/3864; North Sea, Ettrick oil field, complex diagenesis in Zechstein dolomites, 88M/6314; Turkey, Antalya, at base of thrust sheets, shear structs. in, 88M/2713

formations, *Belgium*, sedimentology, diagenesis, 88M/4643

 nodules, Belgium, Verviers synclinorium, pseudomorphosed, occurrence, 88M/4641

Ankerite, X-ray refinement of struct., 88M/0280

Anorthite v. feldspar

Anorthoclase v. feldspar

Anorthosite, Proterozoic, Sr isotopic constraints on origin, 88M/4064; Greenland, Umanak area, in reworked Archaean basement, 88M/6378; USA, Idaho, Boehls Butte, role of replacement in genesis of, 88M/2875, tourmaline in, 88M/6011

massifs, Proterozoic, overview, 88M/4411;
 Norway, Rogaland and Vest-Agder,
 Proterozoic, petrogenesis, Nd, Sr isotopic

study, 88M/5748; USA, New York, Adirondack Mts., Marcy, contamination of, petrol., isotopic evidence, 88M/5670

 — plutons, Canada, Labrador, Nain igneous complex, Flowers River area, alkalic to transitional ferrogabbro magma assoc. with, 88M/6209

— diorite suite, South Africa, Namaqua mobile belt, REE geochem., 88M/5638

— gabbro complex, Canada, Ontario, E Bull Lake, layered, multiple alteration events in, evidence from fracture mineralogy, ⁴⁰Ar-³⁹Ar dating, 88M/1972; E Bull lake, Folson lake fault zone, cyclic deformation, chem. transport, evidence for seismic pumping?, 88M/1975

ANTARCTICA, diploptene in sediment cores, 88M/4145; geol., summary, 88M/1176; granulite-facies rocks, review, 88M/1499; I-overabundances in meteorites, geochem. study, 88M/2524; isotopically anomalous ¹⁹⁶Hg, ²⁰²Hg in achondrite meteorites, 88M/4231; lateral isotopic discontinuity in lower crust, 88M/2121; new types of spherules, poss. meteoritic impact origin, 88M/4236; Antarctic Peninsula, alkaline volcanic rocks, geochem., tectonic setting, review, 88M/0687; metalliferous mineralization, 88M/5233; role of strike-slip faulting in tectonic evolution, 88M/6135; E. Antarctic ice sheet, Elephant Moraine, extreme 18O depletion in calcite, chert clasts, 88M/5574; Bransfield Strait, marine sediments, lipid geochem., 88M/2439; Byrd Glacier area, Mt. Madison, Li-bearing pegmatite, Bi-Sb-Pb-Cu bearing veinlets, 88M/0386; Dronning Maud Land, Vestfjella, basalt lavas, geochem., 88M/2248; W Dronning Maud Land, Annandagstoppane, granite, geochronol., 88M/4910; Ellsworth-Thiel Mts. ridge, sedimentary rocks, petrol., 88M/2994; Enderby Land, Fyfe Hills, pyroxene exsolution in granulites, evidence for 1000°C metamorphic T in Archaean continental crust, discussion, 88M/6016, reply, 88M/6017; Tonagh Is., Napier complex, pyroxene-bearing meta-ironstone, granulites, 88M/1500; Graham Land, S. Oscar II coast, geol., 88M/1175; James Ross Is., orientated calcareous concretions in fine-grained Cretaceous sediments, 88M/1434; regional significance of proglacial delta-front reworked tuffs, 88M/4589; Lützow-Holm Bay, West Ongul Is., Cl-rich K-hastingsite, anals., 88M/0994; Marie Byrd Land, Ford Ranges, granite, geochronol., 88M/4911; McMurdo dry valleys, streams, geochem., role in evolution of four lakes, 88M/5831; McMurdo Sound, Cainozoic history from MSSTS-1 drillhole, 88M/6136; Mt. Erebus. Ca-rich anorthoclase, occurrence with volcanic glass, 88M/3470; Nimrod Glacier area, diamictite, poss. Proterozoic glaciation on seventh continent, 88M/6345; Palmer Land, geol. of parts of W. coast, 88M/6137; Black Coast, magnetic anomalies over, 88M/3138; E Palmer Land, central Black Coast, geol., report on fieldwork, 88M/4511; Rauer Is., Precambrian geol. relationships

high-grade gneisses, 88M/3112; central Ronne Ice Shelf, borehole evidence for thick layer of basal ice, 88M/1594; Ross Sea embayment, McMurdo volcanic group, ultramafic xenoliths Cainozoic. 88M/2753; S. Pole, atmospheric Ir as measure of meteoritic component, 88M/2535; Victoria Land, granitic rocks, implications of chem., isotopic variations to crustal struct.. tectonics. regional 88M/2866; Beacon Supergroup, steranes, triterpanes in sandstones, siltstones, 88M/2438; Carapace Nunatak and Coombs Hills, additional field interpn. of Jurassic sequence, 88M/6262; Daniels Range, granitic rocks, petrogenesis, 88M/4510; N. Victoria Land, S- and I-type granitic rocks, inferred geotectonic setting, 88M/4458; Yamato Mts., meteorites collected in December 1969, 88M/0937

Anthophyllite v. amphibole

Anthracite v. coal

Anthraxolite v. hydrocarbons

Antigorite v. serpentine

- Antimony, preconcentration of Se, Sb from sea-water for detn. by graphite furnace AAS, 88M/1687; Canada, Quebec, Abitibi, Dest-Or orebody, distribu., 88M/0867
- mineralization, Germany, Mid-European Saxothuringian zone, mineralogy, geol., geochem., ensialic origin, 88M/3535
- Antlerite, *Germany*, new min. occurrences, 88M/6475; *Greece*, *Laurium*, occurrence, 88M/4823
- Apatite, decorating natural faces of mins. with anthraquinone, 88M/1510; detn. palaeo-heat-flux from fission scar tracks in, 88M/3125; F faces, morphol., theory, observation, 88M/1835; fission track annealing in, 88M/4330; from metamorphic rocks, compn. of, 88M/4331; geometric of dissolution modelling 88M/3768; REE in, CL, microprobe study, 88M/1070; solubility in clay, zeolite bearing systems, application to agriculture, 88M/1932; U-Th-He dating, potential thermochronometer, 88M/1597; woodhouseite, svanbergite, in hydrothermal ore deposits, products of apatite destruction advanced argillic alteration, 88M/1060; Egypt, terrestrial and marine skeletal, geochem., REE patterns for, 88M/3867; USSR, Gt. Caucasus, from plutonic, metamorphic rocks, U concn., distribn. in, 88M/5576; Kachar iron-ore deposits, REE in, 88M/5575
- deposits, USSR, Khibiny apatite-bearing intrusion, compn. of rock-forming mins., and origin of, 88M/6192; Kola Peninsula, Khibina massif, modelling of formation, 88M/1205; Maimecha-Kotuiskaya province, Magan, petrol., 88M/2849
- —, fluorapatite, Canada, Quebec, Gatineau, and assoc. mins. from skarn, chem. compn., 88M/6075
- —, francolite, *SE France*, diagenetic indicator, 88M/6076
- Aphthitalite, glaserite, in evaporitic basin, genesis, distribn. of, 88M/4646
- Aplite, USA, Nevada, White Pine County, muscovite from, 88M/6027

- Apoamphibolite series, USSR, Belomor'ye, geochem. features, 88M/5754
- Apophyllite, England, Cumbria, Shap, occurrence, 88M/3152; USSR, Kotui River basin, from amygdaloidal lava, 88M/6046
- fluorapophyllite, neutron diffraction, thermogravimetric study of H bonding, dehydration behaviour in, 88M/5118
- Apparatus, Hilger Monospek D500 scanning monochromator, installation, commissioning of, 88M/4946; use of sandwich-type composite metal gaskets in MA8 type apparatus to generate 15 GPa in 1·8 cm³ sample volume, 88M/0425

Aquamarine v. beryl

- Aquatic systems, deposits, Pb-210/Po-210 speciation in, 88M/5902
- Aqueous solutions, kinetics of reaction of silicates with, 88M/3681; quantitative anal. of chem. species in, using Raman spectrometry, equilibrium model calculations, 88M/4960
- species, calculation of thermodynamic, transport props. at high P, T, aqueous tracer diffusion coefficients of ions to 1000°C, 5 kbar, 88M/3680
- systems, containing N, K, Mg chlorides, Cu, Mn, Fe(III) distribn. between phases in, 88M/0491
- Aquifers, crystalline basement, in tropical envt., development of, 88M/2369; detn. of Rn migration times in aquifer-borehole systems from decay-product accumulation, 88M/2367; in Quaternary deposits, combining U isotope, water-He surveys to detect fault waters entering, 88M/4099; isotopic studies on sea-water intrusion, interrelations between water bodies, 88M/5870; ¹⁵N evidence for mixing in, 88M/5867: radiometric velocities. convective-dispersive model, 88M/5855; ³²Si in different types, implications for groundwater dating, 88M/5856; England, Berkshire, Chalk, baseline geochem. condns., basis for groundwater quality management, 88M/2374; E. Midlands, Triassic sandstone, fluid flow, diagenesis, 88M/5810; France, Grenoble, in alluvial plains, origin of waters of, 88M/5869; New Zealand, nitrate contamination, 88M/5335; Rotorua, geothermal, hydrol., 88M/5850; Romania, Dobruja, assoc. with calcareous deposits, isotopic anals., 88M/5872; Sicily, and surface waters, tr. elem. distribn., 88M/2380; Sudan, Butana sandstone, sources of recharge to basal Nubian, 88M/5858
- ARABIAN SEA, property-property relations: 22° and 9° discontinuities, 88M/4103; surficial sedimentsm geochem., 88M/2311; U distribn., origin in surficial sediments, 88M/5715
- Aragonite, calcite–aragonite transition, mechanism, microstructs. induced by transformation stresses, strains, 88M/2050; dissolution in sea-water, effect of *P* on, 88M/2006; *W Alps*, significance of, 88M/6395; *Canada, Ontario, Thames River*, intracellular crystals in fresh-water alga, 88M/4328; *Egypt*, in apparant phosphatic sediments, 88M/0176

- strontianite solid solutions, therm dynamics, results from stoichiometral solubility at 25 and 76°C, 88M/0541
- Archaean era, formational complexes peculiarities of metallogeny, 88M/4691
- ARCTIC OCEAN, Alpha Ridge, CESAN Canadian Expedition, initial geol. repor 88M/2670; CESAR cores, late Cainozed sediments, clay mineralogy, 88M/1746
- Ardennite, Greece, Andros Is., and W Alpi Haute-Maurienne, crystal chem., lattic parameters, 88M/4247
- Arenite, *Spain*, *Almadén*, illite-kaolinit: pyrophyllite in, 88M/5018

Arfvedsonite v. amphibole

- ARGENTINA, NW, min. deposite metallogenic episodes, 88M/1901; role at tectonism, fractional crystallization in origin of lower Palaeozoic epidote-bearing granitarocks, 88M/4534; Blanca Bay, seasonat spatial distributions of Cu, Cd, Zn in sea-water 88M/1984; San Juan, Tulum valley, isotopic evidence for diff. origins of groundwater 88M/5863
- Argentopyrite, England, Cumbria, Garrigith Tynebottom Mine, in Ag-Ni-Co min assocn., 88M/1051
- Argillite, and interbedded greywacke, use d sorting curves in studying K₂O alteration of 88M/4005
- Argon, equatorial Atlantic, dissolved Ardistribn., 88M/2385
- isotopes, ⁴⁰Ar/³⁹Ar dating v. agg determination
- Arkose, USSR, Rybachy peninsula, mircompn., 88M/2983
- Armangite, Sweden, Nordmark, occurrence 88M/4323
- Armenite, more common than supposed similar optical props. to plagioclases 88M/2552
- Arsenic, Ar geochem. in geothermal systems. 88M/4113; Canada, Quebec, Abitibio Dest-Or orebody, distribu., 88M/0867 Sweden, Bothnian Bay, regeneration from estuarine sediments, 88M/5315
- compounds, detn. of, elem.-specifid detectors for liquid chromatography 88M/3292
- Arsenolamprite, Germany, Black Forest Grube Sophia, occurrence with Ag 88M/1582
- Arsenopyrite, crystal struct. refinement, electron microscopy of, 88M/5152; surface oxidation of, using cyclic voltammetry, 88M/2042
- Asbestos, and products, alternatives to, (book), 88M/1700; Greece, Zidani, chrysotile, deposit, occurrence, 88M/4726
- mineralization, India, Andhra Pradesh, Cuddapah, Vempalle fm., along stylolites in. 88M/4396
- Asbolan, forms of occurrence of Ni in. 88M/1035
- Ash, fly, comparison of several sample prepn techniques for anal. of, 88M/3317; from combustion of particles from combustion of coal, 88M/3620
- —, silicic, USA, California, Searles Lake diagenetic alteration of, 88M/4674
 Ashcroftine v. zeolite

ASIA, blueschist belts, poss. periodicity of blueschist facies metamorphism, 88M/6374; central, accessory mins. of lamproite-like rocks, 88M/2853; mummy, geochem., 88M/4140; E, metallogeny of deep zones in island-arc systems, 88M/5187; W, Alpine–Himalayan belt, tectonics, metallogeny, 88M/1885

Asphalt v. hydrocarbons

Astrobleme, Canada, Devon Is., Haughton, and included biota, fission-track dating, 88M/1653

ATLANTIC OCEAN, cosmogenic vertical profiles, 88M/4081; geochem. of fallout Pu, pore water study in shelf, slope, deep-sea sediments, 88M/1952; organic matter transformation in waters near mouth of Amazon, 88M/5848; sulphide deposits, review, 88M/5235; variability in deep and intermediate water circulation during past 25 000 yrs, N. Hemisphere modulation of Southern Ocean, 88M/5832; peri-Atlantic regions, heat flow, heat production, crustal struct. in, 88M/6452; equatorial, dissolved Ar distribn., 88M/2385; N Atlantic regions, Proterozoic stratigr., (book), 88M/3332, introduction, 88M/4355; later Proterozoic envts., tectonic evolution, 88M/4373; N, benthic foraminifera, late Pliocene variations in C isotope values, ?biotic control, 88M/0761; geochem. of fallout Pu, ²⁴⁰Pu/²³⁹Pu ratios, significance, 88M/1953; identification of underwater extraterrestrial impact crater, 88M/0967; major volatiles from MORB basalt glass, calibration to He: size fraction anal., 88M/0695; Nd isotopes as tracers in marine sediments, aerosols, 88M/5691; retreat velocity of polar front during last ¹⁴C accelerator mass deglaciation, spectrometry detn., 88M/0002; Gt. Meteor East, S Nares Abyssal Plain, U in pore-waters from sediments, 88M/4080; Laurentian Trough, Se profiles in sediments, 88M/5689; Madeira Abyssal Plain, tr.-elem. mobility during early diagenesis in Quaternary distal turbidites, 88M/2293; Mid-Atlantic Ridge, P in foraminiferal sediments from cores, comparison with P in limestones, 88M/0760; Mid-Atlantic Ridge, 26 N, distribn., chem. of suspended particles from active hydrothermal vent site, 88M/5580; Mid-Atlantic Ridge, between 12 N and 15 N, hydrothermal CH₄, 88M/5527; Mid-Atlantic ridge triple junction near 14 N, mantle heterogeneity from tr. elems., 88M/5621; N, subtropical, hydrocarbons, atmospheric transport, input, 88M/1954; NE, ²²⁶Ra, Ba in deep water, 88M/4079; S, clay min. assocns., structl. evolution, Jurassic to Eocene, 88M/0221; Ascension Is., magma and fluid evolution in lavas, granite xenoliths, 88M/2793; Ascension, Bouvet, St. Helena, Gough, Tristan da Cunha, ocean island basalts, geochem., 88M/2792; Fernando de Noronha Is., Miocene, Pliocene alkaline volcanic series, 88M/1369; volcanic rocks, isotopic geochem., 88M/5620; Gough Is., augite phenocrysts in alkaline basalt, chem.

zoning, 88M/1378; volcanism, revised stratigr., 88M/4895; off SW Africa, sea level changes, carbonate dissolution, history of Benguela Current, Oligocene-Miocene, 88M/5708; Rio Grande Rise, geochem. of sediments, redox evolution, 88M/4007; S. Tristan da Cunha volcano, dynamic interpn., 88M/4590; NW, natural and anthropogenic radionuclide distribus... 88M/1951; particulate Mn dynamics in Gulf Stream warm-core rings, surrounding waters, 88M/2400; REE transport inferred from Nd isotopic observations, 88M/0822; continental margin, organic C oxidation, preservation in sediments, 88M/2453; mid-ocean channel of Labrador Sea, turbidites, petrogr., provenance, 88M/1435; Sohm abyssal plain, heat flow and depth vs. age for Mesozoic, implications for Bermuda Rise, 88M/1549; Amazon shelf, U geochem., evidence for U release from bottom sediments, 88M/2401; Angola Basin, organic matter geochem., black shale formation condns., 88M/5705; Cape Basin, dissolved As in waters of, 88M/4101; Cape Verde abyssal plain, investigation of authigenic, diagenetic processes by chem. leaching of pelagic sediments, 88M/5704; Mid-Atlantic Ridge, Au, native Cu in supergene sulphides, 88M/5569: Mid-Atlantic Ridge, near Kane Fracture Zone, normal MORB, exptl. petrol., 88M/0459; New England seamount chain, geochem. evolution, isotopic, tr.-elem. constraints, 88M/5669; Nova Scotian Rise, deep-sea sediment transport storm, 88M/4666; Sargasso Sea and Gulf Stream, Cu complexation in warm-core ring waters, 88M/5846; Sargasso Sea, Co, Cu, Mn, Ni in, 88M/5845; Senegal coastal basin and E. central Atlantic basin, comparative evolution from min., geochem. study, 88M/4655; Sierra Leone Rise, equatorial Mid-Atlantic Ridge and New England ferromanganese Seamount Chain, mineralogy, encrustations, chem., 88M/2294; Zaïre Fan, tr. elem. fractionation, distribn. in turbidites, deposits, homogeneous and pelagic 88M/2306

Atlasovite, new min. of volcanic exhalations, 88M/1094

Augite v. pyroxene

Aurichalcite, England, Pennines, occurrence, 88M/4802

Austinite, *Greece*, *Laurion*, *Karnareza*, crystal struct., 88M/5154

AUSTRALIA, and Zimbabwe, Archaean Au mineralization, S isotope compns., genesis, 88M/0320; desert dunes, TL, radiocarbon dating, 88M/1638; dykes detected by airborne magnetic surveys, 88M/6198; groundwater geochem., applications to exploration of U deposits, 88M/2392; He transfer across mantle-crust boundary beneath, and magnitude of mantle hydrocarbon degassing, 88M/2122; biomarkers from Ordovician sediments, fossil algae, 88M/2435; micromorphol., analytical studies of fine matrix of humus iron podzol, 88M/3426; oil shales, elem.

abundance data, 88M/5892; Pb-Zn-Ag exploration, 88M/5208; source of Ra in anomalous accumulations near sandstone escarpments, 88M/4176; Australian Shield, Archaean gold deposits, genesis, tectonic control, metamorphic replacement model, 88M/1891; Pacific Rim, major thermal cycle contributing to late Palaeozoic-Mesozoic magmatism, mineralization, 88M/5219; Rundle, effect of igneous intrusion on oil shale, 88M/2436; central, Arunta Block, upthrusted Proterozoic basic-granulite-anorthosite suite and anatectic gneisses, evidence on nature of lower crust, 88M/1496; Arunta Inlier, Entia Gneiss complex, amphibolites, geochem. evidence for Proterozoic transition from extensional to compressional tectonics, 88M/6416; N, sediment-hosted Cu-Zn-Pb deposits, depositional models, 88M/5209; E, anatomy of silicic calderas, evidence from Triassic, 88M/6249; ancestral Pacific margins, 88M/6128; and New Zealand, geol. units common to, 88M/6127; Cainozoic volcanic provinces, petrol., chem., 88M/5210; He isotopic evidence for recent subcrustal volcanism, 88M/3955; lower crust, xenolith evidence, 88M/1127; mantle xenoliths, greatest concn. in world, 88M/2751; volatile-rich mantle beneath, 88M/2777; off E., sea-floor weathering of phosphate nodules, effect on U oxidation state, isotopic compn., 88M/2321; SE, lithospheric mantle, isotopic, geochem. constraints on growth, evolution, 88M/3953; Bunga beds, Kuroko-type volcanic succession, assessment of rock types, eruptive style, setting, 88M/6250; SE, Canberra, compn., formation of grainy void cutans in soils with textural contrast, 88M/0181: S and E, ferricretes and related surficial ferruginous materials,

investigations, 88M/2993 —, NEW SOUTH WALES, Barrington Tops batholith, evolution of mantle-derived, augite-hypersthene granodiorite crystal-liquid fractionation, 88M/2864; Big Cadia, Fe-Cu deposit, tr. elem. distribn., Co:Ni ratios, genesis, 88M/3908; Broken Hill, giant Pb-Zn deposit, sedimentary model, 88M/0384; multi-stage mobilization, remobilization of mineralization, 88M/1855; Broken Hill and Geco metamorphosed sulphide deposits, amazonite, occurrence, implications, 88M/2592; Broken Hill and Mt. Isa, large Pb-Zn deposits, 88M/3556; Cobar, Cu, Au deposits, in deformed turbidites, structl. control, hydrothermal origin, 88M/0354; depletion haloes in fresh rocks surrounding orebodies, implications for exploration, ore genesis, 88M/2470; Cooma complex, sequential growth of cordierite, andalusite porphyroblasts, microstructl. evidence of prograde reaction, 88M/6415; Coombadjha, Hianana volcanics, remnants of late Permian tuff ring, lava flow, 88M/6251; Crookwell, Cordillera mine, cuprotungstite, occurrence, 88M/6059; Drake volcanics, late Permian submarine volcaniclastic rocks, origin, provenance, 88M/6252; Hillgrove, Au-Sb deposits, implications of fluid inclusion data on origin of, 88M/5283; Kingsgate, molybdenite-bismuth deposits, evaluation of fluid inclusion decrepitometry using quartz from, 88M/4278; Lachlan Fold Belt, contrasting deformation of S- and I-type granitic rocks, 88M/6201; I-and S-type granites, opaque mineralogy, mafic 88M/6202; min. chem., V-bearing margarite, 88M/6034; Lightning Ridge, highest quality opal, occurrence, mining methods, 88M/3779; Little Broken Hill, ecandrewsite, new min., Zn analogue of ilmenite, 88M/4338; Mole granite, O isotope evidence for mixing of magmatic, meteoric waters during tin mineralization, 88M/0648; Mt. Dromedary, fractionation in zoned monzonite pluton, 88M/6199; Mt. Isa Inlier, Mary Kathleen, discovery of thrust klippen, 88M/3111; New England, Palaeozoic fore-arc metabasic rocks, petrogenesis, 88M/4404; New England fold belt, tectonic evolution, metallogenesis, 88M/5218; Parkes area, Palaeozoic shoshonitic volcanism assoc. with Au-Cu mineralization, 88M/5221; Redrock deposit, Permian submarine epithermal precious metal system, 88M/5277; Sunny Corner, Ag-Pb-Zn-Cu sulphide deposits, geol., ore genesis, 88M/5596; The Crescent, gabbro, dating, 88M/1635; fission track Warrumbungle volcano, Zr-rich sodic pyroxenes in felsic volcanics, 88M/6020; Woodlawn, Zn-Pb-Cu sulphide deposit, ore formation, interpn. from field observations, metal zoning, 88M/0385; Woodlawn and Captains Flat, massive sulphide deposits, regional geol. setting, 88M/5220

-, NORTHERN TERRITORY, E. Alligator River Terrain, Proterozoic, thermal history, fission track study, 88M/3240; S. Alligator Valley, Coronation Hill, U-Au mine, epigenetic sandstone-type deposit hosted by debris-flow conglomerate, 88M/1926; Davenport province, fault reactivation, superimposed folding in Proterozoic sandstone-volcanic sequence, 88M/1174; Groote Eylandt, Mn-carbonates in sedimentary Mn deposit, 88M/2643; Harts Range, relative timing of folding, metamorphism in ruby mine area, 88M/3110; Pine Creek Geosyncline, assessment of stable Pb isotope measurements for U exploration, 88M/2468; U deposits, 88M/5177; Rum Jungle, tourmalinite, geol. setting, genetic, economic implications, 88M/3906

-, QUEENSLAND, Devonian mineralization, volcanic sources in sediments of the 'Palaeopacific Rim', 88M/5211; distribn., nature, origin of red sesquioxidic materials beneath red soils, 88M/3430; geothermal crust-mantle profile, transition, volcanology, xenolith petrol., seismic data, 88M/1328; kaolinitic soils, size, charge characteristics, 88M/1771; late Triassic distal air-fall tuffs, 88M/6253; metamorphic plumbing system in Proterozoic calcsilicates, 88M/3107; min. distribn. of pathfinder elems. in gossan derived from Pb-Zn deposits, 88M/5931; N, major NW

dyke swarm zone, 88M/6203; SE, Cretaceous porphyry type mineralization, 88M/5216; NW, cordierite-anthophyllite rocks, metamorphosed magnesian pelites, 88M/3109; Charters Towers goldfield, relationship of gold quartz mineralization to granodiorites, mylonites, 88M/5276; Condor deposit, geochem., min. residences of tr. elems. in oil shales, 88M/5724; Featherbed volcanics complex, Permo-Carboniferous, geol., petrol., mineralization, 88M/6129; Fraser Is., Triangle Cliff, history of coastal dunes, 88M/1636; Georgina Basin, pyrite, organic matter in Cambrian marine sediments, 88M/4040; Irvinebank-Emuford area, fracture-controlled feldspathic alteration in granites assoc. with tin mineralization, 88M/5213; Kidston gold deposit, brecciation, mineralization, alteration, 88M/5274; nature, origin of ore-forming fluid in, 88M/5273; Lawn Hill circular struct., shatter cones, presumed astrobleme, 88M/5997; Mary Kathleen U-REE skarn, geol., genesis, 88M/5281; REE, U mins. present as daughter crystals in fluid inclusions, 88M/0808; McBride Province, amphibole, scapolite, origin, 88M/1282; Mt Carbine, W deposit, fluid, metal sources in, 88M/5594; Mt Chalmers, alteration assoc. with volcanogenic sulphide ores, 88M/2588; Mt Isa, stratabound phyllosilicate zones assoc. with syntectonic Cu orebodies, 88M/5212; Mt Leyshon, geol., gold mineralization, 88M/5275; Mt Morgan mine, Mt. Chalmers mine and UNMC prospect, penecontemporaneous faulting, volcanogenic massive sulphide deposits, 88M/5214; Mt Oxide, new Cu Al phosphate, 88M/6097; Nambour and Caloundra 1:100 000 sheet areas, industrial rock, min. resources, 88M/5302; North Arm, Triassic volcanic rocks, epithermal mineralization, alteration, 88M/5215: North Arm epithermal precious-metal prospect, sulphide-selenide-metal alloy 88M/3598; Pegmont, oxidized profile of BIF-assoc. Pb-Zn mineralization. 88M/2469; Somerset Dam, layered gabbro intrusion, cyclic units in, 88M/2865; Surat Basin, Walloon Coal Measures, oil-prone 88M/2409; electrogeochem, patterns in surface soils, detection of blind mineralization beneath exotic cover, 88M/0876; massive sulphide deposit, min. data, 88M/5272; Thalanga, Dry River and Mt. Chalmers, base metal deposits, Pb isotope data, bearing on exploration, ore genesis, 88M/2175

SOUTH AUSTRALIA, needle-fibre calcite in Quaternary pedogenic calcretes, morphol., crystallogr., origin, 88M/6072; Beverley deposit, accretionary migration of U in Tertiary sandstones, TL evidence, 88M/2322; Blanche Point, silica-rich layering, 88M/1431; Burra Cu orebody, origin, age, 88M/0383; Coorong region, Pellet Lake, sedimentol., min., isotopic 88M/4039; anal., Dome Rock, cobaltaustinite, new arsenate 88M/6088; Fisherman Bay, recent megapolygon-spelean limestone, C, O

isotopic compn., 88M/5723; Flindel Ranges, zircon age evidence for la Precambrian Acraman ejecta blank diapir, 88M/4905: Patawarta mineralization, 88M/5595; Mt Schar volcanic eruption, TL dating, 88M/163 Olary Block, metamorphism, compresside with cooling in Proterozoic fold be 88M/1497; Olympic Dam, Cu-U-A deposit, geol., 88M/5178; Puttapi tsumcorite, occurrence, 88M/6070; Roxi Downs, Olympic Dam deposit, roxbyit new Cu sulphide min., 88M/6096; Sprin Creek Cu mine, hentschelite, perloffit hentschelite, occurrence, 88M/6083; Stuaw Shelf-Adelaide geosyncline, Cu minerali ation, 88M/0355; Umberatana, chem variation in tourmalines, 88M/098. Palaeozoic alkaline-peralkaline granitel role of volatiles in crystallization on 88M/3954; Umberatana, Tourmaline Hil granite, fluid inclusion study, implication for hydrothermal activity, wallroc metasomatism, 88M/0810; 'West Coalaraea', U mineralization in Tertiar palaeochannels, 88M/5217

, TASMANIA, natural vein quartz, e.p. spectra, related to mineralization 88M/5222; Beaconsfield, electron spil resonance of auriferous and barren quartz 88M/4177; Elliot Bay, Mt. Read volcanics base metal exploration, geol., exploration 88M/0356; Mt. Read volcanics, base meta exploration, Pb isotope signatures, genetic implications, 88M/0649; Que River, REI mobility around volcanogenic polymetallisulphide deposit, 88M/5598; Renison Tik Mine, development, application of EDXI borehole loggers, drill core analysers 88M/2473; dynamic hydrotherma modelling, 88M/5279; Rosebery, Zn-Pt deposit, tourmaline-rich rocks assoc. with 88M/6009; Rosebery north-end orebody precious metals, 88M/5280; Rosebery and Mt. Lyell, volcanic-hosted sulphide deposits chem. remobilization, 88M/1851

—, VICTORIA, iron in brown coal Mössbauer study, 88M/1432; modern dolomite deposition in continental, saline lakes, 88M/6341; W, Cr-diopside lherzolites, pyroxenites, isotopic geochem. 88M/3957; W, metasomatic processes in Cr-diopside lherzolites, 88M/3956; Clune Goldfield, mins. from, 88M/6074; North Mammoth Prospect, polymetallic Sn-Cu Ag-Au-Pb-Zn vein mineralization lithogeochem. exploration, 88M/0873 Simmon's Bay, natrolite arches, 88M/2604

, WESTERN AUSTRALIA, Cr-bearing mins, from metamorphosed hydrotherma alteration zone in Archaean, 88M/0977 danielsite, new sulphide min., 88M/1087 iron oxides in lateritic soils, 88M/3425 lucasite-(Ce), new min., descripn., struct. 88M/2661; Ni ores, deformation remobilization, 88M/1856; Ni sulphid gossans, microtextural evaluation 88M/0353; Pb isotopic signatures comparisons with South Africa, 88M/0033 xenoliths from kimberlites, lamproites 88M/2752; Agnew Ni deposit, role of fluid in metamorphism of komatiites, 88M/1458; Albany, Precambrian granulite facies rocks, high-T retrograde adjustments 88M/3106; Coppin Pool, perroudite, crystal struct., crystal chem., 88M/3501; Darling Range, assocn. of maghemite, corundum in laterites, 88M/3424; muscovite in bauxitic laterite, 88M/5034; Errabiddy, corona textures between kyanite, garnet, gedrite, in gneisses, 88M/3105; Golden Grove, volcanic-sedimentary facies assocns. hosting volcanogenic massive sulphide mineralization, 88M/5278; Green Bushes Sn-Ta pegmatite system, dispersion anomaly in pisolaterite above concealed ore deposits, 88M/0879; Hampton Hill Station, australites, occurrence, 88M/2537; Irregully fm., use of veins to establish cover fold history, 88M/1173; Kalgoorlie dist., evidence for structl. repetition in greenstones, 88M/3108; Kalgoorlie Au deposit, Golden Mile dolerite, host rock and fluid control on carbonate assemblages, 88M/0647; Golden Mile, Archaean gold deposits, source requirements, metamorphic replacement model, 88M/2177; Kambalda, ground melting and ocellar komatiites, Pb isotopic study, 88M/6254; Hunt Mine, Archaean gold-quartz vein deposit, fluid access, fluid-wall rock interaction in genesis, 88M/0321; Kimberley region, australites, occurrence, 88M/2538; Mt Mulgine, granitic rocks, Rb/Sr dating, 88M/1634; Mt Weld, compositional variation in pyrochlores from carbonatite latite, 88M/4308; supergene, secondary monazite from carbonatite laterite. 88M/3868; Murchison Province, Big Bell Au deposit, disseminated Archaean, example of pre-metamorphic hydrothermal alteration, 88M/0317; Big Bell, high-grade metamorphic processes which influence Archaean gold deposits, 88M/4747; Northampton Block, Rb-Sr, Pb isotope data, 88M/5597; Pilbara Block, Archaean strike-slip faulting, related ensialic basins, iron ore classification, 88M/2698; 88M/5223; paraotwayite, new Ni hydroxide min., 88M/4343; Gorge Creek Group, tectonics pre-dating horizontal sedimentation, 88M/1498; Talga-Talga Subgroup, Archaean, age of, early evolution of mantle, 88M/4907; Whim Creek Belt, Archaean ensialic fault-bounded basin, structl. evolution, 88M/4405; E. Pilbara, Archaean granite greenstone terrain, metamorphic history, 88M/1639; Swan Bridport calcilutite, Plain, Holocene, lithol., 88M/6340; Teutonic Bore, massive sulphide deposit, geol., 88M/5284; Western Gneiss terrain, Pt group elems. in mafic-ultramafic rocks, 88M/0809; Yilgarn Archaean Diemals area, post-kinematic granitic intrusions, Pb/Pb dating, 88M/4906; Yeelirrie area, Cainozoic stratigr., 88M/6342; Yilgarn Block and Gascoyne Province, U provinces, geol., 88M/5179

Australite v. tektite AUSTRIA, and Hungary, Upper Triassic peritidal carbonate sequences, comparative

statistical anal., 88M/2981; mins. from caves, desciptn., 88M/2642; Amstall, amstallite, new min., descriptn., crystal struct., 88M/1082; Austrian Molasse, migration of radionuclides (Sr-90, Cs-137) in clay sediments, 88M/0149; Bohemian Massif, vermiculite in serpentinite, mineralogy, genesis, 88M/0171; Moldanubian zone, granites, Rb/Sr dating, 88M/1614; Danube, sediment transport, envtl. isotope study, 88M/5882; E. Alps, Koralpe and Saualpe, eclogites, geochem., origin, 88M/5749; Lower Engadin window, ophiolite, petrol., geochem., 88M/2937; E. Alps, Tauern window, Mesozoic ophiolites and non-ophiolitic metabasites, petrol., 88M/2936; Gurktal nappe, Rb/Sr dating, 88M/1616; Habachtal, emerald-bearing dist., mins. of, geol., mining history, 88M/4817; Innsbruck, Ortler, Sarntal Alps and Brixen granite, dykes, mineralogy, chem. compn., petrogenesis, 88M/5629; Katschberg road tunnel, goyazite, celestine, occurrence, 88M/6474; Knappenwand, mins., mining history, 88M/4818; Koralpe, Klementkogel, spodumene, occurrence, chem. anal., 88M/2563; Mittersill, boninites as poss. source rocks of W mineralization, 88M/3893; Salzburg, condns. of formation of glauconite in sandstone, 88M/2586; Leogang, mins. from, 88M/1572; secondary from, 88M/1573; Leogang, Inschlagalm, celestine, new occurrence, 88M/1574: Salzburg, Mooseck. baumhauerite, second occurrence, anals., 88M/2631; Tauern Window, uplift history, 88M/1615; Grossvenediger, high-P min. breakdown-products assemblages, metasediments, 88M/3064; Islitzfall, Penninic Glockner nappe, geochem., 88M/3065; Tyrol, Oetztal-Stubai complex, chromite and Cr-spinel occurrences in metacarbonates, 88M/4300; Vienna Museum of Natural History, fine min. specimens, descriptn., 88M/3171; Vorarlberg-Tirol, early Alpine overprint in northern 'Silvrettakristallin' and western 'Phyllitgneiszone', radiometric evidence, 88M/4888

SUBJECT INDEX

Awaruite, Oman, Semail ophiolite, occurrence with native iron in harzburgite, 88M/1017

Axinite, ferroaxinite, France, Versoyen and Italy, Aoste, occurrence, descriptn., 88M/2554

-, manganaxinite, USA, SW Maine, in skarns, 88M/4826

AZORES, Flores, volcanic formations, petrol., 88M/1380

Azurite, Germany, Hesse, Altenmittlau, occurrence, 88M/4808

Baddelevite, precise U/Pb ages of diabase dykes, mafic-ultramafic rocks, using tr. amounts of, 88M/4912; Algeria, Laouni layered intrusion, new natural occurrence, 88M/1036; Italy, Alban Hills, Colle Cimino, in ejected block, 88M/4291

BAHAMAS, caliche profiles in Pleistocene dune, petrogr., geochem. anal., 88M/4052;

Bahama Escarpment, subsidence history, nature of crust underlying, 88M/3179; San Salvador, Upper Cainozoic sediments, use of Sr isotopes to constrain timing, mode of dolomitization, 88M/0795

Baileychlore v. chlorite

Balangeroite, electron-diffraction, electron-microscopy study, crystal structs., polytypism, fibre texture, 88M/0253

Balipholite, struct. refinement, 88M/1796 Ballast, USA, Wyoming, report, 88M/1949

BALTIC SEA, D, ¹⁸O in water, 88M/5807; dissolved U, anals., 88M/2383; Fe-bearing mins. in bottom sediments, 88M/1744; peculiarities of tr. metal distribn. in waters, sediments. 88M/5693; small-scale variations of dissolved organic Cu in waters, 88M/5808; S, distribn., poss. sources of elems. in sediment cores, 88M/5694; Courland Gulf, forms taken by Fe, Mn, Cu, Zn, Al, Ti in mixing zone, 88M/5806; Landsort Deep, origin of Fe-Mn-rich suspended matter, 88M/5809

BALTIC SHIELD, 2200 m.y. of crustal evolution, 88M/2677; aspects of geoelectric models, 88M/2675; outline of Precambrian evolution, 88M/2676; role of komatiites in plate tectonics, evidence from Archaean, Proterozoic crust, 88M/2673; westward growth of, 88M/2678; central, hydrothermal alteration as control of regional geochem., ore formation, 88M/3526

BANGLADESH, Bengal basin, Surma group, implication of shale diagenesis on cementation of reservoir sandstones, 88M/4659

BARBADOS, late Pleistocene mixing zone dolomitization, 88M/6356

Barbosalite, Portugal, Mangualde, occurence, 88M/6081

Barićite, further occurrence, 88M/1072

Barium, detn. in sea-water by direct injection graphite furnace AAS, 88M/1683

-deposits, Canada, geol., 88M/1945

Baryte, Belgium, Liège, Chaudfontaine, assoc. with augite, olivine, 88M/3887; calcite layers interbedded in, petrogr. study, connection between sulphate evaporites and 88M/3602; mineralization, England, Yorkshire, S. Yorkshire coalfield, Silverwood Colliery, rare occurrence, 88M/1561; Italy, Sardinia, Masua mine, from karstic caves, fluid inclusion, stable 88M/0609; isotope studies, hydrothermal, use of Sr isotopes to determine sources of, 88M/5578; Spain, Sierra del Guadarrama, assoc. with sulphides, fluid inclusion study, 88M/6069; relationship with fluorite, 88M/5194; Turkey, Hüyük, in Lower-Middle Cambrian formations, 88M/3605; USA, Colorado, Grizzly Bear mine, occurrence, 88M/4835

crystals, USA, South Dakota, Elk Creek, descriptn., 88M/2636

deposits, Canada, Yukon Territory, Selwyn Basin, stratiform, genetic model, 88M/1869; TEA baryte deposit, Au distribn. in, 88M/2186; Central Europe, unconformityrelated vein, geochem., geol. constraints on formation, 88M/2156; India, Andhra Pradesh, Mangampeta, descriptn., 88M/4395; Morocco, W. High Atlas, in albitite, 88M/0396; USA, Missouri, geol., geochem. controls of mineralization, 88M/0664

- sediments, Canada, Nova Scotia, Walton-Cheverie, stratiform, in sabkha sediments, 88M/0397
- -- -fluorite deposits, Spain, Central System, Colmenar de Arroyo, genetic aspects, 88M/3580
- -- -iron-pyrite deposit, Italy, Apuan Alps, Buca della Vena, mineralogy, 88M/1912

Basalt, altered, ratio correlations, major elem. mobility in, comment, 88M/5618; changes in TRM, ARM due to lab. heating, 88M/1522; Cs interaction with, 88M/5327; DSDP samples, palaeomagnetic studies, 88M/3141; genetic relationship between komatiitic and tholeiitic, in Precambrian greenstone belts, 88M/2732; geochem., tectonic setting inferred from, 88M/0673; hydrothermal treatment at 460°C. comparison of natural with hydrothermally formed, 88M/0453; hydrothermally altered, nuclear waste elems., movement through, 88M/5311; intraplate, geochem. of primary, secondary phases in, DSDP samples, 88M/2952; lab. shock emplacement of noble gases, N, CO2 into, implications for trapped gases in shergottite meteorite EETA 79001, 88M/4228; Iherzolite xenoliths in, petrogenetic, crystallochem. significance of minor, tr. elems. in olivine, pyroxene, garnet, spinel, 88M/2541; meteoric water-, interactions, lab. study, 88M/2005; petrogenesis, study of REE data using pattern recognition approach, 88M/5617; selection of, for palaeointensity studies, 88M/1542; studies related to origin of marginal sea floors, 88M/1217; subduction related, elemental, isotopic variations in, evidence for three component model, 88M/5615; submarine, consequences of maghemitization on magnetic props. of, 88M/1535; weathering, changes in rock chem., mineralogy, 88M/0189; weathering, formation of iddingsite, 88M/4274; Antarctica, Dronning Maud Vestfjella, geochem., 88M/2248; S. Atlantic, DSDP samples, geochem., 88M/0693; DSDP samples, petrogr., min. chem., 88M/1377; ore mineralogy, 88M/1032; Cameroon, Poli, pan-African pre-orogenic belt, from volcanic assocn. consistent with ensialic tectonic model over thinned continental crust, 88M/1310; Canada, Abitibi greenstone belt, Archaean, varioles in, products of spherulitic crystallization, 88M/1353; Bay of Fundy, from wildcat oil well Mobil Gulf Chinampas N-37, North Mountain, petrol., 88M/2911; District of Franklin, Natkusiak, geol., Cu occurrences, 88M/2912; Nova Scotia, Digby, North Mountain, models for fissure eruption from stratigr., petrochem., 88M/6208; Ontario, Deadman Hill area, geochem., 88M/0741; Newton Township, enriched komatiitic,

genesis by crustal contamination of depleted komatiite magma, 88M/2914; E China, Cainozoic, clinopyroxenes in mantlederived inclusions in, min. chem., geol. significance, 88M/4254; E China, Cainozoic, low P clinopyroxenes in, main petrol. characteristics, significance, 88M/4255; DSDP, Leg 89, oceanic intraplate sheet-flow, petrol., geochem., 88M/2250; France, Massif Central, peridotite xenoliths in, textural, geophys. evidence for asthenospheric diapirism, 88M/2770; Haiti, Dummisseau fm., geochem., implications for origin of Caribbean Sea crust, 88M/5677; NE Iceland, meteoric water-basalt interactions, field study, 88M/2370; Central Indian Ridge, petrol., estimates of magma injections in two-layered reservoir, 88M/6291; Japan, late Cainozoic, variation of Al₂O₃ content in, 88M/1318; Gifu pref., Sakashita-cho and Takayama-shi, K/Ar Pacific Ocean, dating, 88M/1629; Mesozoic, basalt, 88M/2249; E Pacific, from young spreading axes, O isotopic compn., 88M/3961; Syria, Golan Heights, origin of red clays interbedded with, 88M/1762; Turkey, Ordu, Kuyucak, Upper Miocene, petrol., genetic implication, 88M/1314; USA, Columbia Huntzinger flow, evidence of surface mixing, petrogenetic implications, 88M/1356; Hawaii, Molokai, Kalaupapa Basalt, USA, 88M/0736; Washington, Grande Ronde, Cohassett flow, two-stage vesiculation, 88M/4600; USSR, Norilsk region, influence of petrogr. characteristics on physico-mechanical props., 88M/4793; Zaïre, Kivu rift, Kahuzi-Biega, min., petrol., 88M/4572

- —, alkali, Na₂O-rich, Rb/Sr, Sm/Nd ratios of metasomatized mantle, implications for role in petrogenesis of, 88M/4422; *Atlantic, Gough Is.*, augite phenocrysts in, chem. zoning, 88M/1378; *France, Massif Central*, petrol., geochem. relationships between pyroxene megacrysts and, 88M/5554; *Japanese island arc*, xenoliths in, 88M/2755; *USA*, *Arizona*, *Geronimo volcanic field*, xenolith-bearing, petrol., geochem., evidence for polybaric fractionation, implications for mantle heterogeneity, 88M/4437
- dykes, France, Hérault, Roques-Arièges, dyke swarm, magma propagation deduced from vesicle orientation, 88M/6168; Italy, N. Apennines, Mt. Aiona ultramafics, petrol., 88M/6285
- flood, provinces, basalt geochem., tectonic discrimination within, 88M/0674; S Brazil, low-, high-TiO₂, origin from picritic parentage and common mantle source, 88M/2930; India, Deccan, at Cretaceous/ Tertiary boundary, 88M/4574, 88M/4575; new theory of origin, evolution, 88M/4573; Rajmahal-Bengal-Sylhet Traps, widespread early Cretaceous, geochem. data, 88M/2240
 glass, dissolution in sea-water, mechanism,
- rate, 88M/3679; MORB, noble gas abundances in, 88M/0694; primitive MORB, anhydrous partial melting of

peridotite compns., implications for origin of, 88M/3640; processes controlling firstage of alteration by seawater, exptl. stude between 200° and 320°C, 88M/2003; Atlantic, MORB, major volatiles from calibration to He: size fraction anal 88M/0695

—, high-alumina, convergent zone, Na₂0 content of, 88M/5616; Japanese island are xenoliths in, 88M/2755

—, island arc, high-alumina, origin of 88M/6282; rutile saturation in magmas implications for Ti-Nb-Ta depletion in 88M/3649; Aleutian Island Arc, high-Mg phase relations, implications, 88M/1996

— liquid, and olivine, clinopyroxeness partitioning of Hf, Lu, Ti, Mn between 88M/0456; partitioning of Fe, Ni, Cobetween olivine, metal and, exptl. thermodynamic study, application to compn. of lunar core, 88M/5397

- melts v. melts, basaltic

—, ocean island, S Atlantic, Ascension, Bouvet, St. Helena, Gough, Tristan da Cunha, geochem., 88M/2792; Pacific Ocean, Austral Is., tr. elem. evidence for origin of, 88M/5658

-, ocean ridge, along-strike magma mixing beneath mid-ocean ridges, effects on isotopic ratios, 88M/2933; high P phase equilibrium constraints on origin of. 88M/1210; influence of primary magma compn., H₂O, P on differentiation, 88M/1399; O, Sr, Nd, Pb isotope geochem., 88M/0697; source regions of, evidence for enrichment processes, 88M/3018; mid-Atlantic ridge, near Kane Fracture Zone, exptl. petrol., 88M/0459; Pacific Ocean, Nauru Basin igneous complex, petrol., geochem., large-volume, off-ridge eruptions during Cretaceous, DSDP samples, 88M/2953; Scotland, NNE of Shetland Isles, new Tertiary sill complex of MORB type, prelim. report, 88M/2935

–, oceanic, aegirine-augite, fassaite, melanite, unusual occurrence in, 88M/2560; alkali, linear alkali correlation in, 88M/2266; flood, DSDP, geochem., implications for origin, 88M/2251; phase-equilibria constraints on genesis and magmatic evolution, 88M/2931; Bering Sea, Olutorski Range, Cretaceous, geochem., 88M/2267; USA, Hawaii, West Maui, volcanic rocks. origin inferred from Pb, Sr, Nd isotopes, multicomponent model for, 88M/2257

-, tholeiite, glass, exptl. alteration by sea-water between 3 and 50°C, 88M/2004 continental, discriminant diagrams to identify, 88M/6180; Canada, Huronian low-Ti continental, lithophile elems. in evolution of Precambrian mantle 88M/3966; Ontario, Thessalon region low-Ti continental, geol., geochem. 88M/2270; Cyprus, Troodos ophiolite Ayios Mamas, tholeiite-boninite sequence petrogenesis, poss. evidence for splitting of volcanic arc, 88M/6286; Greenland shelf Tertiary, low-K, from exploration wells 88M/6231; Iceland, Th, Sr, O isotopic geochem., crustal influence on mantle derived magmas, 88M/5624; Pacific Ocean Futuna and Alofi islands, petrogr., min., 88M/6264; Mariana forearc, geochem. characteristics, role of incompatible elem.-enriched fluid in arc petrogenesis, 88M/4424; USA, Hawaiian islands, mantle source, constraints from lavas, ultramafic inclusions, 88M/3019; Kilauea and Mauna Loa, S, C abundances in lavas, 1972–1975 eruptions, 88M/2259; USSR, Ukraine Shield, primary magmas of, in Precambrian greenstone belts, 88M/2851

- tholeiitic magmatism v. magmatism, tholeiitic
- -- rhyolite volcanite associations, early, geochem. differences, 88M/0730
- --sea-water system, exptl., O, H isotopic investigation of, 88M/0796

Basaltic magma v. magma, basaltic

- rocks, continental, oceanic, main petrochem. parameters, trends, 88M/0690; China, Jilin Province, Mt. Qixingshan, Cainozoic, petrol., petrogenesis, 88M/4578; Greece, central Euboea, major, tr. elem. geochem., poss. geotectonic implications, 88M/2942; USA, Rensselaer Plateau and Chatham slices of Taconic allochthon, chem., tectonic setting, 88M/4599
- Basanite, crystal-liquid expts. in presence of C-O-H fluid buffered by graphite + iron + wüstite, exptl. method, near-liquidus relations in, 88M/1297; France, Massif Central, Pliocene, geochem. changes during surface weathering, 88M/5029; Pacific Ocean, Marotiri Islets, petrogr., geochem., 88M/2254; Marqueses Archipelago, petrogr., geochem., 88M/1283
- flows, France, Ardèche, Plateau des Coirons, zeolitization of, in continental envt., example of mass transfer under thermal control, 88M/6234
- Basic dykes, Canadian Shield, Superior Province, Precambrian, geochem., 88M/6211; Scandinavia, palaeomagnetism, 88M/6457
- magma v. magma, basic
- rocks, France, Brittany, R. Vilaine estuary, controls on P-T-t deformation path from amphibole zonation during progressive metamorphism of, 88M/6387; Norway, Central Scandinavian Caledonides, Trondheim nappe, geochem., 88M/3039; USA, Minnesota, in Proterozoic igneous complex, Pb, Nd isotope, tr. elem. constraints on origin, 88M/3969; USSR, Altai, Zyryanovskii ore region, geochem. zoning of, 88M/2235
- -metabasic rocks, *India, Himachal Pradesh, Mandi-Pandoh area*, petrochem., 88M/6188
- ultrabasic intrusion, Canada, District of Mackenzie, Booth River, petrol., 88M/2873
- mocks, precise U/Pb ages of, using tr. amounts of baddeleyite, zircon, 88M/4912; middle Asia, lamproite-like, accessory mins. of, 88M/2853; Western Australia, Western Gneiss terrain, Pt group elems. in, 88M/0809; Spain, Ronda peridotite, origins of, 88M/4474
- Bassetite, Sardinia, Cagliari, Arcu s Linnarbu, and other U mins., 88M/2650

Batholith, USA, California, Sierra Nevada, composite Devonian island-arc, 88M/6220 Baumhauerite, Austria, Salzburg, Mooseck, second occurrence, anals., 88M/2631

SUBJECT INDEX

- Bauxite, geosynclinal, genesis, 88M/1939; role of carbonate rocks in genesis of, 88M/1418; Australia, Darling Range, muscovite in, 88M/5034; N. China, Carboniferous, sedimentology, 88M/1429; SE Venezuela, geochem. of ferruginous bauxite profile, 88M/5609
- deposits, France, Ariège, dolomitization, dedolomitization of carbonate platform, 88M/6324; Italy, Sardinia, Olmedo, min. data, 88M/1937; USSR, Severoonezhsk region, discovery of lithiophorite in, 88M/6061
- Bauxitization, key role of micro-organisms in process of, 88M/4625; *Taiwan*, *Tatun volcanic area*, geochem., isotopic studies, 88M/5721
- BAY OF BENGAL, distribn. of biochem. compounds in sediments, 88M/5917
- Bayerite, rehydration of Al hydroxides, application to equilibrium studies of boehmite/bayerite, 88M/2037
- Bazhenovite, USSR, Chelyabinsk coal basin, new min., 88M/4336
- Becquerelite, crystal struct., crystal chem., 88M/3496

Beidellite v. clay minerals

Bejaminite, phase relations in systems Ag₂S-Cu₂-PbS, Ag₂S-Cu₂S-Bi₂S₃, 88M/2044

BELGIUM, anhydrite formations, sedimentology, diagenesis, 88M/4643; anhydrites, carbonates, isotopic geochem., 88M/4018; ironcrust, magnetic props., and synthetic Mn-substituted goethites, 88M/1538; min. deposits, 88M/3527; non-refractory clays, loams, min., chem., phys. props., 88M/3398; Pb-Zn deposits, S isotopic geochem., 88M/3854; stream sediments over Palaeozoic formations, geochem., 88M/4013; U distribn. in Devonian shales, sandstones, computerized measurement chain of non-destructive gamma spectrometry, 88M/4016; zircon in morphol. study, stratigr. importance, 88M/4645; Ardennes, coticule (whetstone) in schists, geol., tectonic, metamorphic features, 88M/4707; quartz, fluid inclusion study, 88M/3874; use of geochem. methods to characterize metamorphic domain, 88M/4055; Oizy area, Lower Devonian, U concentration mechanisms in mineralized fractures, 88M/2151; between Channel and Meuse River, Variscan front and Midi fault, new cross-section, struct., 88M/1156; Blaton, ferristrunzite, new member of strunzite group, 88M/2659; Brabant, Palaeozoic turbidites, lithostratigr., petrogr., geochem. study, 88M/4708; Dyle and Thyle valleys, Cambrian-Ordovician sequence, lithol., 88M/4639; Ginant synclinorium, Yves Gomezée, calcareous, silicious pseudomorphs of gypsum, anhydrite, 88M/4642; Liège, Chaudfontaine, baryte assoc. with augite, olivine, 88M/3887; calcite layers interbedded in baryte, petrogr. study, connection between sulphate evaporites and

mineralization, 88M/3602; Remouchamps, tephra in stalagmite, new Pleistocene stratigraphic marker, ²³⁰Th/²³⁴U dating, 88M/4549; Massif de la Vesdre, Membach, limestones, dolomites, stratig., sedimentol., geochem., 88M/4014; R. Meuse, radioactive isotopes detected in, May 1986, from Chernobyl fallout, 88M/5320; Namur province, Haut-le-Wastia, secondary phosphate mins., occurrence, anals., 88M/4334; Havelange, cobaltite, occurrence, anals., 88M/4322; Rocroi Massif, gold and grey nodules of monazite in alluvial pan samples from small rivers, 88M/4332; Neufchâteau, monazite nodules in river sediments, 88M/4333; Neufchâteau syncline, syngenetic U concentration in black shales, 88M/3873; Nismes-Couvin, cavities in limestone filled with sandy limonite deposits, geol., metallogeny, 88M/4015; Quenast neck and Lessines sill, geochronol., isotopic geochem., 88M/3208; anhydrite St-Ghislain, and calcite pseudomorphs after anhydrite from Viséan rocks, Sr isotopic anal., 88M/3864; anhydrite from drill hole, tr. elem., micro-min. compn., 88M/4017; Stavelot Massif, sedimentary structs, in Lower Salmian. indicators of turbidite sedimentation, 88M/4638; vantasselite, new min., 88M/2666; Verviers synclinorium, pseudomorphosed anhydrite nodules, occurrence, 88M/4641; Verviers and Namur synclinoria, Devonian dolostones, petrogr., geochem., 88M/4640; Visé, anthraxolite, bituminous substance, occurrence, new data, 88M/4126

- Benstonite, USA, Illinois, occurrence, fluorescence of, 88M/6480; Hardin County, Harris Creek fluorspar dist., occurrence, 88M/6479
- Bentonite, effect of induced structl. modifications on physicochem. behaviour of, 88M/0148; in radioactive waste disposal, review of research in support of Basalt Waste Isolation Project, 88M/3636; K-, investigation by XRD, analytical TEM, 88M/4986; Na₂CO₃-activated, ageing of, 88M/3355; *Italy, Sardinia*, new deposit, 88M/0170; *Spain, Almeria, Cabo de Gata region*, chem., min. characteristics, 88M/3354; *USA, upper Mississippi Valley, Decorah subgroup*, chem. correlation, 88M/0186; *USSR, Kushmurunskii graben*, Mesozoic, min., geochem. features of formation of, 88M/1758
- particles, USA, Wyoming, density, compressibility of, 88M/4976
- BERING SEA, Chernobyl radioactivity found in mid-water sediment traps, 88M/5338; Olutorski Range, Cretaceous oceanic basalt, geochem., 88M/2267
- Berlinite, α-, AIPO₄, lattice defects, water precipitation in, TEM study, 88M/5443; piezoelectric, elastic props., effect of defects on phys. props., 88M/3126; synthetic, growth defects, incommensurate phase, 88M/1080; wet, and wet quartz, water precipitation, diffusion in, 88M/5395
- Bertrandite, neutron-diffraction study, 88M/1794; thermodynamic parameters of,

88M/0457; USA, Illinois, occurrence, 88M/6478

Beryl, decorating natural faces of mins. with anthraquinone, 88M/1510; growth textures of natural, X-ray topographic study, 88M/2550; props., occurrences, review, 88M/4248; solubility, to 573 K, 88M/2077; Brazil, Goias State, Porangatu deposits, stable-isotope investigation into origin of, 88M/5551; Minas Gerais, formational condns. of 'three-stage' crystals, 88M/0981; Kenya, unusual V-bearing, anals., 88M/0982; USA, Maine, Topsham, occurrence, 88M/4830

—, aquamarine, Zambia, descrptn., 88M/0586

—, emerald, -coloured rough, found to be quartz with green lacquer, 88M/3773; descriptn., 88M/2107; in sword, descriptn., 88M/3771; Lennix synthetic, props., 88M/5492; separation of natural from synthetic, by IR spectroscopy, 88M/2098; synthetic, named emeraldolite, 88M/5493; Austria, Habachtal, emerald-bearing dist., mins. of, geol., mining history, 88M/4817; Brazil, Goias State, Porangatu deposits, stable-isotope investigation into origin of, 88M/5551; Minas Gerais, Belmont mine, occurrence, 88M/2097; Itabira, geol.,

occurrence, 88M/0575; Colombia, Chivor

studies,

Somondoco, chem. compn., fluid inclusions,

origin, 88M/5491; USSR, hydrothermal

colorimetric

Muzo deposits, min., spectral

88M/3772;

synthetic, props., 88M/0576
Beryllium, Be systematics in young volcanic rocks, implications for ¹⁰Be*, 88M/3915; transportation of Be with H₂O at high *P*, implication for magma genesis in subduction zones, 88M/5524

isotopes, ¹⁰Be in Earth System, 88M/5523;
 Be, recent applications in Earth sciences, 88M/5522; ¹⁰Be, ⁹Be, transport in ocean, 88M/5732

minerals, thermodynamic parameters of, 88M/0457

Beta-duftite, Germany, Hesse, Altenmittlau, occurrence, 88M/4808

Betafite, *Italy*, *Latium*, occurrence, 88M/1576 Betekhtinite, *Portugal*, *Aljustrel*, occurrence, 88M/5196

Billietite, crystal struct., crystal chem., 88M/3496

Binary solid solution, computational problem in calculating solvus of, 88M/5352

Biogeochemical exploration ν . exploration, biogeochemical

Biography, George Smith, Australian mineralogical hero, 88M/4838

Biological markers, acyclic isoprenoids, 88M/2410; cyclic terpenoids of geosphere, 88M/2411; detection, identification by computerized-gas chromatogr.-mass spectrometry, 88M/2414; early-stage of steroids, diagenesis 88M/2412; extractable from coal, 88M/2417; higher-molecular-weight markers, 88M/2415; porphyrins in geol. record, 88M/2413; use in petroleum exploration, 88M/2416

Biotite v. mica

Birnessite, catalytic role in transformation of iron, 88M/3389; transformation to buserite, todorokite, manganite, under mild hydrothermal treatment, exptl. study, 88M/0526; England, Cornwall, Altarnun, Treburland mine, occurrence, 88M/6471; Scotland, Renfrewshire, Gourock, occurrence, 88M/6468

Bischofite, and carnallite, development of microstruct. during deformation of, in transmitted light, 88M/0515

Bismuth, in igneous rocks; geochem., 88M/5612; spectrophotometric detn. in sulphide minerals, 88M/4937; Zimbabwe, Renco mine, controls on deposition, 88M/0373

Bismuthinite, evolution of bismuthian, stibian mineralization in cassiterite-silicate-sulphide metallization, 88M/4313; phase relations in systems Cu₂S-PbS-Bi₂S₃, Ag₂S-PbS-Bi₂S₃, 88M/2045; England, Cornwall, S. Crofty mine, 6 cm crystals, occurrence, 88M/1564

Bitumen v. hydrocarbons

Bityite, *Finland, Eräjärvi*, comparison with related Li-Be brittle micas, 88M/2590

BLACK SEA, Holocene sapropel, stable C isotopic evidence for marine origin of organic matter in, 88M/5906; H₂S distribn., hydrol. elems. in bottom-water layer, 88M/2384; tr. metals in water column, 88M/5804; W., biogeochem. gas studies, 88M/5818; Bulgarian shelf, rates of biogeochem. processes in shallow-water sediments, 88M/4034

Blatterite v. pinakiolite group

Blossite, α-Cu₂²⁺V₅⁵⁺O₇, El Salvador, Izalco volcano, new fumarolic sublimate, 88M/1083

Blueschist, Canada, Yukon, Ross River and Watson Lake areas, in mylonitic allochthons, 88M/3118; USA, California, Skookum Gulch, early Palaeozoic, condns. of metamorphism in, 88M/1505

— belt, Greece, Cyclades, tectonic evolution, 88M/3803

Bobfergusonite, crystal struct., 88M/1836; Canada, Manitoba, Cross Lake, new primary phosphate min., 88M/1084

Boehmite, rehydration of Al hydroxides, application to equilibrium studies of boehmite/bayerite, 88M/2037; Italy, Sardinia, Olmedo, in bauxite deposits, 88M/1937; Pakistan, Attock Dist., Kala Chitta Range, in bauxitic clays, 88M/1756

BOLIVIA, epithermal precious and base metal vein-type deposits, comparison of rock geochem. and min. alteration as exploration guides, 88M/2486; polymetallic hydrothermal ore deposits, fluid inclusion studies, 88M/3566; Andes, E delimitation of cryptic Eocene tectono-thermal domain, K/Ar, 40Ar-39Ar dating, 88M/0046; Asientos mining dist., Quioma mine, Pb-Zn-Ag deposits, geol., 88M/5294; Callavaya region, Andes, mineralogies of silt, clay fractions of twelve soil profiles, 88M/0224; Meseta Los Frailes, U concentration mechanisms in volcanic envt. during hydrothermal processes, 88M/2280; Oruro-Caracollo fluvio-lacustrine basin. isotopic study, 88M/5864; San Pablo mine dickite, chem., phys. data, 88M/50122 Velasco alkaline province, petrol., chem. crystallization history, 88M/2800

Bone, fossil, variability in preservation of isotopic compn. of collagen from 88M/5887; min. phase in, poss. linkage to organic matrix by protein-bound phosphate bonds, 88M/1071; preferential preservation of noncollagenous protein during diagenesis, implications for chronometric, stable isotopic measurements, 88M/4129

Boninite, Austria, Mittersill, as poss. sources rocks of W mineralization, 88M/3893; Japan, Bonin Islands, Chichijima, magmas mixing, 88M/1321

Borate deposits, *Turkey, Emet*, geochem., origin, 88M/3604

Borneo v. Indonesia

Bornite, coexisting with stannoidite, in tin ore, mineralogy, texture, physicochem. envt. of formation, 88M/0619; Italy, Ortiglieto, Marciazza, Cu-pyrite mineralizations, 88M/1882; USSR, Udokan, from Cudeposit, electrochem. characteristics, 88M/4312; Yugoslavia, Bor Cu mine, investigations of, 88M/2625

— crystals, *Morocco* and *USSR*, occurrence, 88M/4825

Boron, abundance, localization in granulites and lower continental crust, 88M/2358; adsorption, desorption of B by goethite, 88M/5419; application to analytical hydrogeochem. of spectrophotometric method for B detn., 88M/0081; behaviour in salt-marsh sediments, implications for palaeo-B distribus., 88M/2337; *T*, pH controls over isotopic fractionation during adsorption of B on marine clay, 88M/2338; use of layered synthetic microstructs. for quantitative anal., 88M/3312

isotopes, sedimentary cycle of, 88M/0792
 BOTSWANA, Okavango Delta, carbonate accumulation on islands, 88M/1422; Orapa

accumulation on islands, 88M/1422; *Orapa kimberlite pipe*, He isotopic variability within single diamonds, 88M/5560; *Orapa kimberlite*, Nb-Cr-rutile, occurrence, 88M/1024

Boulangerite, *Portugal*, *Aljustrel*, occurrence, 88M/5196

Bournonite, evolution of bismuthian, stibian mineralization in cassiterite-silicate-sulphide metallization, 88M/4313; Spain, Grupo Cantabria Pb-Zn deposit, occurrence, 88M/3581; USSR, E. Transbaikalia, Srednegolgotaiskoe deposit, occurrence, 88M/1062

Boyleite, *Switzerland*, *Valais*, occurrence with zincocopiapite, 88M/2639

Braunite, ferrian, synthesis, characterization, 88M/3733; Italy, Ortiglieto, Marciazza, Cu-pyrite mineralizations, 88M/1882; Switzerland, Grisons, Vals, occurrence, 88M/2583

BRAZIL, amethyst, classification, 88M/5500; effects of green manure on isotopically exchangeable phosphate in soil, 88M/0225; fluorite deposits, classification, 88M/5310; identification of U provinces, 88M/5182, laterites, climate, palaeoclimatic inferences from distribn., min. compn. of, 88M/6333;

NE, granite types, current knowledge. 88M/5678; NE, Cachoeirinha-Salgueiro foldbelt, peralkalic magmatism, geochem., 88M/5679; S, low-, high-TiO2 flood basalts, origin from picritic parentage and common mantle source, 88M/2930; Bahia, Campo Formoso and Carnaiba, phlogopitites assoc. with granites, 88M/1463; Caraiba complex. sapphirine parageneses, influence of Fe²⁺-Fe³⁺ distribn. on stability in natural assemblages, 88M/3120; Lagoa Real, granitic basement, hydrothermal albitites, U mineralization, U/Pb, Rb/Sr, Sm/Nd chronol., 88M/4918; Brumado mine, polarized absorption spectra of sellaite in near IR, 88M/3123; Buritirama, constraints on phase relations in system CaO-MnO-MgO-K₂O-Al₂O₃-SiO₂-CO₂-H₂O inferred from min. data, 88M/2566; Carajas, Salobo, formation of ultra-thin Cu-S films on mins., weathering product from iron formation, 88M/5568; Ceará State, Fortaleza, Tertiary alkaline province, O isotopes, REE geochem., 88M/5680; Espírito Santo, Brasiliano mobile belt, structl., petrol., geochem. study, 88M/6225; Santa Angélica pluton, complex concentric granitic intrusions in coastal mobile belt, 88M/6222; Espirito Santo Basin, onshore part of, oils from wells, geochem. anals, 88M/5899; Goias, exploration for kimberlites, min. chem. of stream sediment samples, 88M/2507; Chapada, metamorphosed wall-rock porphyry Cu deposit, origin, geochem., 88M/0392; Porangatu deposits, stable-isotope investigation into origin of beryl, emerald, 88M/5551; Mato Grosso, concentration of gold in in situ laterites, 88M/1900; Minas Gerais, growth formational condns. of 'three-stage' beryl crystals, 88M/0981; topaz, occurrence, 88M/0579; Belmont mine, emeralds, occurrence, 88M/2097; Fortaleza de Minas O'Toole Ni deposit, geochem. orientation survey, 88M/5933; Guaxupé Massif, Proterozoic, geochem. studies, 88M/0812; Humaita granite pegmatite, moraesite from tourmaline mine, 88M/4335; Itabira, emerald, geol., occurrence, 88M/0575; Urucum pegmatite, rare mins. from, 88M/2618; Para State, Azul, lateritic Mn deposit, petrol., 88M/0393; Paraná basin, bimodal fissural volcanic suites, K-Ar age, Sr isotopes, geochem., 88M/5681; Irati fm., oil shale kerogen, ESR study, 88M/2456; Piratini, phonolite suite, petrol., geochem. studies, 88M/6223; São Paulo, Jaboticabal, tinguaite, petrol., 88M/2880; Urucum, Fe-Mn ore deposits, O isotope study, 88M/3992

Brazilianite, *Italy, Giogo di Toirano*, phosphate mineralization in Permo-Triassic sequence, 88M/1073

Breccia, SW Finland, intrusive-like tectonic, occurrence, 88M/3045; Indonesia, Kalimantan, Pamali Breccia, diamondiferous, reassessment, 88M/4426; Ireland, Galway granite, K-feldspar, from Mo-Cu stockwork deposit, 88M/6160; USSR, S. Primor'e, stanniferous dacitic automagmatic, mineralization in, 88M/3521

Brewsterite, crystal symmetry, order–disorder struct., 88M/0265; occurrence, optical orientation, 88M/6047

Brine v. also water, saline; acid metal-rich, volcanic crater lake, condenser for, 88M/4601; concentrated, models of min. solubility in, application to field observations, 88M/3664; concentrated, procedure for H isotope anal. of water from, 88M/4069; evolution in magmatichydrothermal systems, conceptual model, 88M/2196; H isotope anal. using H2-water equilibration method, 88M/4073; non-oxidizing, U mobility in, field, exptl. evidence, 88M/2357; underground, classification by total salinity, 88M/5819; Canada, in Precambrian rocks, 87Sr/86Sr ratios as indicators of water/rock interactions, application to, 88M/3822; Canadian Shield, brine-bearing vugs, key to understanding of secondary gold enrichment processes, evolution of, 88M/3824; Cl stable isotope compn., 88M/3823; W Canada sedimentary basin, Ca-Cl, in Devonian formations, origin, 88M/4110; E. European Platform, in crystalline basement, radiolytic salt enrichment and, 88M/3832; Mediterranean, Bannock basin, formation, 88M/1420; Namibia, Damara orogen, sedimentary and tectonic, role of, 88M/5787; USA, Appalachians, evidence for Late Palaeozoic migration in Cambrian carbonate rocks, 88M/0607; California, Salton Sea geothermal system, and metallogenesis in modern sediment-filled rift, 88M/5789; hypersaline, metamorphosed Plio-Pleistocene evaporites and origins of, fluid inclusion evidence, 88M/5545; Michigan and Appalachian Basins, Sr, O, H isotopic compn., 88M/5784; central Mississippi Salt Dome basin, metal-rich, geochem., 88M/5788; New Mexico, Salado fm., in salt, model for evolution, 88M/5544; Tennessee and Pine Point, chem. evolution during Mississippi Valley-type mineralization, 88M/0665; Texas, Palo Duro basin, deep-basin, geochem., hydrodynamics, 88M/5782

— inclusions, USA, Kansas, Jumbo mine, goethite-bearing, geochem. condns. of ore deposition, 88M/5541

BRITISH ISLES, minerals, supplementary list, Ireland, 88M/4801; Palaeozoic mantle sample, xenolith localities, 88M/2740

Brochantite, *Greece*, *Laurium*, occurrence, 88M/4823

Brockite, USA, Illinois, occurrence, 88M/6478 Bromellite, BeO, multipole anal. of XRD data, 88M/1819; Norway, Oslo, from syenite pegmatite, 88M/4287

Bromide, in water, field detn., 88M/1691

Bronzite v. pyroxene

Brookite, mode of existence, abundance, exptl. study, 88M/0523

Brownmillerite, prepared at 1200°C, reactivity with water, 88M/3756

Brucite, heterogeneous, epitaxial nucleation of protein crystals on min. surfaces, 88M/6031; Pacific Ocean, Tuvalu, Funafuti, occurrence, 88M/6481

Buddingtonite, anhydrous ammonium, hydrothermally grown, 88M/5483

BULGARIA, NE, mineralogy, genesis of clayey component in Mesozoic sediments, 88M/1764; S, Mo in granitic rocks, quartzadularized volcanic rocks, mode of occurrence, 88M/0717; S, W, Mo, Sn in granitic rocks, 88M/0633; Chelopech Cu pyrite deposit, vulcanites, petrochem. characteristics. 88M/3541; Kapitan-Dimitrievo pluton, petrol., geochem., 88M/1250; Madan ore region, simultaneous deposition of zincian tetrahedrite, zincian tennantite in Pb-Zn ore deposit, 88M/2634: Erma-reka sector, gas-liquid inclusions in quartz, sphalerite, fluorite, carbonate, 88M/0294; Pirin deposit, REE in coal, 88M/0767; S Pirin and W Rhodopes, weathering crust, 88M/0191; Plana pluton, scheelite mineralization in metasomatites, 88M/0615; Rila Mt., Kalin granite, K-feldspar from, structl. transformation, geochem., 88M/1004; central Rhodope metamorphic group, eclogites, retrograde metamorphism, 88M/1479; central Rhodopes, REE in orthites from gneisses, migmatitic pegmatites, 88M/2129; syn- and postmetamorphic mineralization, 88M/1480; Jugovo, min.-thermometric investigations for sulphide-fluorite ore deposit, 88M/1916; W. Rhodopes, Dolno-Drjanovo pluton, petrol., 88M/1165; Srednogorie, Sakar granite pluton, age of, 88M/0030

BURMA, tectonic settings for emplacement of granitic rocks, 88M/5202; *Kyauk Pahto*, structl. control of gold mineralization at plate boundary, photogeol. case history, 88M/5254

Bursaite, new data, 88M/4320

Buserite, transformation of birnessite to, under mild hydrothermal treatment, exptl. study, 88M/0526; SW Pacific, in ferromanganese crust, 88M/1034

Cacoxenite, min. inclusions of, found to be rutile, goethite, 88M/5512; Belgium, Namur province, Haut-le-Wastia, occurrence, anals., 88M/4334

Cadmium, detn. of annually-banded corals, 88M/5946; reactions with CaCO₃ surfaces, 88M/5440; role for *Amanita muscaria* L. in circulation of, in non-polluted woodland, 88M/3622; soil sorption at low concentrations, evidence of competition by other heavy metals, 88M/1722, model for Zn competition, 88M/1723; *France, China*, dissolved Cd behaviour in estuaries, consequences for Cd supply to ocean, 88M/3625; *North Sea*, model simulation of atmospheric input of, 88M/5319; *Pacific*, in Fe-Mn nodules, 88M/2181

— mineralization, supergene, England, Northern Pennine orefield, 88M/4804

Caesium, interaction with basalt, 88M/5327

 isotopes, ¹³⁷Cs, *Italy, Adige River estuary*, distribn., behaviour in nearshore sediments, 88M/3635

Calc-silicate rocks, N. and central Portugal, tr.-elem. geochem., 88M/2348; Zambia,

Pan-African Zambezi belt, geochem., 88M/5752

Calc-silicates, Australia, Queensland, Proterozoic, metamorphic plumbing system in, 88M/3107; England, Devon, Dartmoor, from granite, 88M/6003

Calcareous algae, *China*, *Nanjing*, Permian, silicification of, 88M/4662

— concretions, mass transfer and coupled reactions in low grade metamorphism of, 88M/1460; queen conch 'pearls', history, gemmology, 88M/5521; Antarctica, James Ross Is., orientated, in fine-grained Cretaceous sediments, 88M/1434

— deposits, Romania, Dobruja, aquifers assoc. with, isotopic anals., 88M/5872

Calcilutite, Western Australia, Swan Coastal Plain, Holocene, lithol., 88M/6340

Calcio-ancylite v. ancylite

Calcirudite/calcarenite, India, Pranhita-Godavari Valley, Maleri fm., caliche-derived peloidal, Triassic, petrol., 88M/6337

Calcite, and solution at 10–50°C, distribn. coefficient of Mg²⁺ ions between, 88M/0497; chem. diagenesis in thin-sections, ion microprobe as tr. elem. tool, 88M/5947; chem. induced grain boundary migration in, T dependence, phenomenology, applications to geol. systems, 88M/2049; constitutional states, role of OH_n -groups in, at T up to 500° C, 88M/3767; crystals in marble, microscale isotopic zoning in, 88M/4063; Cu in, detection by visible and near-IR reflectance, 88M/1519; dissolution kinetics in system H₂O-CO₂-CaCO₃ with participation of foreign ions, 88M/5437; dissolution, precipitation in soils under semi-arid condns., isotopic approach, 88M/5744; effect of volatiles from kaolinite on calcite dissolution, DTA evidence, 88M/3351; exptl. stretching of fluid inclusions in, implications for diagenetic studies, 88M/0512; fine-grained, effect of sample prepn. on δ^{18} O-value of, 88M/5572; influence of geometry upon crack healing rate in, 88M/5436; influence of grinding on dissolution kinetics of, 88M/5441; ion microprobe anal. of tr. elems. in, application to CL zonation of limestone cements, 88M/5573; low-Mg, synthesis, distribn. coefficient, 88M/5438; model for tr. metal sorption processes at calcite surface, adsorption of Cd²⁺, subsequent solid solution formation, 88M/0498; pedogenic, calcic horizons, quantification, compositional characterization, 88M/2644; shear-sense detn. on striated faults from e twin lamellae in, 88M/2717; simple shear deformation of polycrystalline calcite aggregates at high-rate, 88M/4772; solidsolution thermodynamics in CaCO₃-MnCO₃, 88M/0538; solubility in supercritical CO2-H2O fluids, 88M/0496; spar, role of fungi in diagenetic alteration of, 88M/1064; tr. metal sorption on, applicability of surface precipitation model, 88M/2051; volatile products of clay min. pyrolysis revealed by effect on, 88M/3352; E. Antarctic ice sheet, Elephant Moraine, extreme ¹⁸O depletion in, 88M/5574; South Australia, needle-fibre, in Quaternary pedogenic calcretes, morphol., crystallogr., origin, 88M/6072; Canada, Ontario, Chalk River area, fracture calcites, isotope geochem., 88M/1973; England, septarian concretions from Kimmeridge Clay, diagenetic history, 88M/6319; Germany, Ulm, single crystals, crystal groups, occurrence, 88M/4816; Greece, Naxos, high fluid/rock ratios integrated metamorphism, evidence from C isotopes of calcite in schists and fluid inclusions, 88M/5750; Italy, Sabatini volcanic dist., SH2 deep well, contact metasomatic and hydrothermal mins., 88M/1452; Sardinia, Masua mine, from karstic caves, fluid inclusion, stable isotope studies, 88M/0609; Oman, black carbonaceous, assoc. with serpentinite, 88M/6071; Sweden, Stripa Project, palaeohydrol. inferences from fracture calcite anals., 88M/1968; USA, Virginia, Falling Spring precipitation in, 88M/0833; West Indies, Grand Cayman Is., alteration of sparry calcite crystals in vadose setting, 88M/4326; Zaïre, ikaite pseudomorphs in deep-sea fan, intermediate between calcite and porous calcite, 88M/1063

—, Iceland Spar, crystals, dissolution, effect of surface morphol., 88M/3764; IR spectroscopy in wavelength range 1000–25 000 nm, 88M/1520; kinetics of thermal decompn. of, 88M/0536; China, stratabound, TL study, 88M/1518

—, magnesian, enthalpy of formation, 88M/0540; overgrowths precipitated from sea-water, influence of *T* on compn. of, 88M/0499; synthetic, stabilities in aqueous solution, comparison with biogenic materials, 88M/0537

 rocks, simple shear expts. on, rheology, microfabric, 88M/2730

 textures, pure shear, simple shear, comparison of exptl. theoretical and natural data, 88M/2729

 -aragonite transition, mechanism, microstructs. induced by transformation stresses, strains, 88M/2050

Calcium compounds, CaCO3, effect of vaporization rate on nucleation from Ca(HCO₃)₂ aqueous solutions, 88M/5439; formation, transformation mechanism of, in water, 88M/2053; reactions of Cd with CaCO₃ surfaces, 88M/5440; textures in induced morphol. crystal aggregates of, sheaf of wheat morphols., 88M/2052; Ca hydroxyapatite, thermal lattice expansion of, 88M/6446; Ca metaborate, Ca(BO₂)₂, electron density distribn., 88M/1841; polymorphism of, Ca₂SiO₄, high-P 88M/0546; Ca₂SiO₄, P-T diagram, 88M/3724; tetracalcium ferrite hydrate, high-P synthesis, 88M/0528

Calcrete, southern Africa, computer-aided evaluation of cement raw materials, case study, 88M/1943; South Australia, Quaternary pedogenic, needle-fibre calcite in, morphol., crystallogr., origin, 88M/6072; India, Pune, in alluvial sediments, min., geochem., 88M/1427

Caldera lake, Guatemala, Lake Atitlán, recent geol, history, 88M/2923

Calderas, gravimetric data, study of formation, 88M/4581; E Australia, silicic, anatomy of, evidence from Triassic, 88M/6249; Canada, Newfoundland, Springdale Group, newly recognized Silurian epicontinental-type, geol., 88M/2910; Chile, Andes, La Pacana, major ash-flow, resurgent caldera complex, 88M/1370; Nicaragua, El Limón mining dist., caldera-related gold mineralization, 88M/2927; USA, Hawaii, Kilauea, intrusive rocks, 88M/1339; Kilauea, Uwekahuna Bluff section, stratigr., petrol., 88M/1338; Oregon, Crater Lake Caldera, lithic breccia, ignimbrite, erupted during collapse, 6845 yr B.P., 88M/1357; Wyoming, Yellowstone National Park, deformation, 88M/1360

Caliche, *Bahamas*, in Pleistocene dune, petrogr., geochem. anal., 88M/4052

Camera, modified Gandolfi, with improved adjustment facilities, 88M/0069

CAMEROON, structl. characteristics of clay minerals, goethite, relationships with kaolinite in laterite, TEM study, 88M/5032; N., Precambrian rocks, U/Pb dating, orogenic evolution, chronol. of Pan-African belt, 88M/1620; Mt. Cameroon, active volcano of Cameroon Line, descriptn., 88M/1311; Lake Nyos, gas disaster, magmatological interpn., 88M/2900; Poli, pan-African pre-orogenic belt, volcanic assocn. consistent with ensialic tectonic model over thinned continental crust, 88M/1310; Yaoundé, late Precambrian high-grade gneisses, origin, evolution of, 88M/6408

CANADA, Ba, Sr, F deposits, geol., 88M/1945; biogenic S and acidity of rainfall in remote areas, 88M/1963; CESAR bedrock sample, petrol., geochem., implications for origin of Alpine Ridge, 88M/2916; coal mining, deposits, review, 88M/1946; Cretaceous-Tertiary boundary, relationship between Ir anomaly and palynological floral events at three localities, 88M/4046; exploration geochem., historical perspective, 88M/0866; Geol. Survey radiocarbon dating lab., apparatus, techniques, review, 88M/1640; investigations, interpns. of vertical distribn. of U, Th, K, 88M/3843; lithophile elems. in Huronian low-Ti continental tholeiites. Precambrian mantle, evolution of 88M/3966; magnetic expression of diabase and downward modelling, 88M/6207; mantle xenoliths, occurrence. 88M/2734; offshore non-fuel min. resources, development opportunities, 88M/3609; oil shale deposits, geochem., geol. factors governing exploitation of, 88M/2443; precipitation, groundwater, isotopic compn., 88M/5876; role of isotope geochem, studies in nuclear fuel waste management programme, 88M/1965; 87Sr/86Sr ratios as indicators of water/rock interactions, application to brines in Precambrian rocks, 88M/3822; E, min., microtextural changes assoc. with lime stabilization of soil clays, 88M/1774; W,

fluid inclusion, isotopic evidence on dolomitization, 88M/5543; W Canada sedimentary basin, origin of Ca-Cl brines in Devonian formations, 88M/4110; Abitibi greenstone belt, Archaean, crustal outgassing, LILE enrichment in major lithosphere structs., evidence on source reservoir from Sr, C isotope tracers, 88M/5528; komatiite flows, petrogr., geochem., model for formation, 88M/2273. reply, 88M/2274; varioles in Archaean products of spherulitic crystallization, 88M/1353; Alpha Ridge, CESAR cores, lithostratigr, 88M/2956; Appalachians, collision along irregular margin, regional plate tectonic interpn., 88M/3178; Arctic, biogeochem. prospecting for Au, 88M/2478; Arctic, Sverdrup Basin, Carboniferous to Permian 13C-enriched limestone, comparisons with W. North American ocean margins, 88M/3997; Atlantic Provinces, Windsor (Codroy) Group, base metals in oolitic, stromatolitic limestones, 88M/2332; Bay of Fundy, wildcat oil well Mobil Gulf Chinampas N-37, North Mountain, basalts, petrol., 88M/2911; Canadian shield, Au distribn., dispersion in glacial till assoc. with Au mineralization, 88M/0883; biogeochem., method for gold exploration, 88M/0917; brine-bearing vugs, key to understanding of secondary gold enrichment processes, evolution of brines, 88M/3824; Cl stable isotope compn., 88M/3823; geochem. trends for groundwaters, 88M/3818; halogenbearing mins, in plutonic rocks, poss, source of Cl in saline groundwater, 88M/3821; heat production in Archaean crustal profile, implications for heat flow, mobilization of heat-producing elems., 88M/4774; methane in crystalline rocks, 88M/3833; models of min. controls on compn. of saline 88M/3819; groundwaters, groundwaters and brines in plutons, 88M/3820; Canadian Shield, Grenville Province, synthesis, (book), 88M/0096; Selbaie Cu-Zn-Ag deposit, geochem. alteration assoc. with, 88M/0874; Superior Province, new measurements of heat flow, 88M/3143; Precambrian basic dykes, geochem., 88M/6211; Archaean sulphur cycles, evidence from sulphate mins., isotopically fractionated sulphides, 88M/3994; inverse age stratification in Archaean crust, evidence for infra- and subcrustal accretion, 88M/0038; zircon Lu-Hf systematics, evolution of Archaean crust, 88M/1649; Superior Province, Great Abitibi Dyke, petrol., 88M/6212; Canadian Shield, Winnipeg River subprovince, differential response of U-Pb systems in coexisting accessory mins., implications for Archaean crustal growth, stabilization, 88M/4914; Columbia Icefields, Castleguard Cave, origin of sulphate mins., 88M/3999; Cuthbert Lake, differentiation of ultramafic, mafic, dykes, 88M/6214; Grenville province, central metasedimentary belt, chloritoid-hornblende assemblages in quartz-muscovite pelitic rocks, 88M/0990; W. Grenville Province, metagabbros,

diffusion models for corona formation in, 88M/5758; Gt. Lakes region, metallogeny of Archaean, Proterozoic terrains, 88M/5239; Hudson Bay Lowland, Quaternary raised marine sediments, TL props., age estimates, 88M/4913; Pacific coast, isotopic variation in Recent marine invertebrate shells, 88M/0782; Rocky Mts., Selwyn Range, empirical garnet—muscovite geothermometry in low-grade, 88M/6421

-, ALBERTA, burial metamorphic mins. in Upper Cretaceous strata, 88M/1437; ³⁴S/³²S variations in tr. sulphide, sulphate in carbonate rocks of Devonian reef, 88M/3996; Cascade Coal Basin, Mt. Allan, Kootenay group, Jurassic-Cretaceous, lithol., depositional setting, coal rank-depth relationships, 88M/3000; Kootenay group, Jurassic-Cretaceous, coal-bearing, stratigr., sedimentology, depositional 88M/3004; Mt Allan, Kootenay group, major, minor, tr. elem. distribn. in coal, 88M/4045; Siyeh fm., Proterozoic stratiform Cu deposits, prelim. observations, 88M/1897

-, BRITISH COLUMBIA, application of regional geochem. reconnaissance data for U in surface waters to identifying environmentally sensitive areas, 88M/0408; min. deposits, tectonic settings, review, 88M/2479; Anahim belt, Nazko cone, Quaternary volcano, geol., 88M/6272; Barkerville terrain, granitic orthogneiss, U/Pb dating, 88M/1654; Bluebell Pb-Zn deposit, detn. of radiogenic isotopes in fluid inclusion waters, 88M/5537; Bridge River dist., Congress property, soil, plant geochem. orientation surveys, 88M/2485; Cadwallader group and Intermontane-Insular superterrain boundary, geol., 88M/4409; Carbon Creek coal basin, Gething fm., Lower Cretaceous, stratigr., sedimentol., 88M/3003; N. Cassiar terrain, 2200 m.y. age of zircons in Upper Proterozoic clastic rocks, 88M/3246; Coquihalla Au belt, nature of ore fluids, 88M/2493; Fording coal mine, elem. distribn. in coal seams, 88M/5737; Fraser River Delta, S, low T ash, minor elems. in humid-temperate peat, 88M/4047; Kingsvale, mid-Cretaceous volcanic units, geol., 88M/2915; Kootenay group, Jurassic-Cretaceous coals, fresh and weathered, comparison of elem. distribn. in, 88M/2335; Jurassic-Cretaceous, sedimentology, bearing, stratigr., depositional envts., 88M/3004; Liard River area, carbonate-hosted fluorite-witherite mineralization, role of basinal brines, thermal springs in genesis of, 88M/0660; Maggie, vinciennite in porphyry Cu deposit, 88M/1054; Meager Mt. geothermal system, hydrothermal alteration, fluid geochem., 88M/5838; Meares Is., Westcoast. crystalline complex and related rocks, geol., geochem., cooling history, 88M/3967; Nicola group, late Triassic, early Jurassic subduction-related volcanism, 88M/6271; Peace River basin, and Ontario, James Bay lowlands, two Cretaceous coal-bearing sequences, geochem., 88M/0783; Queen

Charlotte Is., Jurassic stratigr., 88M/3005; Quesnel River gold deposit, geol., soil geochem., 88M/2483; Rayfield River, ultramafic xenoliths, petrol., 88M/2872; Saanich inlet, U, Ra, Th isotope distribns in anoxic fjord, 88M/5803; Shasta, epithermal Au-Ag deposit, multidisciplinary exploration case history, 88M/2484; Vancouver Is., secular variation of Earth's magnetic field, recorded in stalagmite, 88M/3139; Zone A Hat Creek Deposit No. I, concentration of elems. in lacustrine coals, 88M/4151

-, LABRADOR, central min. belt, Upper Aillik Group, Proterozoic, contrasting metallogenic 88M/2183; styles, Circum-Ungava belt, U in, new information, 88M/1893; Double Mer fm., Proterozoic stratigr., 88M/4364; Lac Brisson, unusual peralkaline granite, 88M/2868; Lake Melville, organic C isotope ratios, palaeoenvtl. implications for Holocene sediments, 88M/4150; Nain igneous complex, Flowers River area, alkalic to transitional ferrogabbro magma assoc. with anorthositic plutons, 88M/6209; Saglek-Hebron, late Archaean high-grade metamorphism, granite injection on early Archaean gneisses, chem., isotopic effect, 88M/1120; Strange Lake Zr-Y-Nb-Be-REE deposit, geochem. profile in till, lake and stream sediment, water, 88M/0916; Wilson Lake, retrogressed granulites, geochronol., 88M/1645

-, MANITOBA, actinide, minor elem. mobility in Archaean granitic batholith. 88M/1969; Bernic Lake, Tanco, REE pegmatite, alteration of amphibolitic wallrocks around, 88M/4068; Cross Lake, bobfergusonite, new primary phosphate min., 88M/1084; Flin Flon-Sherridon area, anthophyllite-bearing rocks, 88M/3117; Flin Flon-Snow Lake belt, gold occurrences, prelim. investigation, 88M/1898; massive sulphide deposits, P, T condns. of metamorphism, 88M/4755; metamorphosed massive sulphide deposits, O isotope geochem., 88M/0659; volcanic belt, Amisk area, lithogeochem. data, exploration, implications for min. 88M/0872; Lynn Lake, Nicoba Zn-Cu deposit, geol., prelim. results, 88M/3167; Lynn Lake and Rusty Lake metavolcanic belts, U/Pb dating, two ages of Proterozoic magmatism, 88M/0039; Pikwitonei-Sachigo continental cross section, heat production, thermal conductivity of rocks, implications for thermal struct. of Archaean crust, 88M/3144; Tanco, fluid inclusions in metasomatic tourmaline in zoned granitic pegmatite, 88M/5547

Carboniferous uraniferous granite, rhyolite, geochem., 88M/5665; hilgardite-4M from evaporites, mineralogy, 88M/2623; till geochem., applications, acid rain sensitivity, min. exploration, 88M/2328; *Millstream potash deposit*, lithogeochem. approach to stratigraphical problems, 88M/0870; *Sisson Brook*, overburden geochem. related to W-Cu-Mo mineralization, example of short-

and long-distance glacial dispersal, 88M/0885; *Tetagouche group*, tectonic setting, implications for plate tectonic models of *N. Appalachians*, 88M/2268

-, NEWFOUNDLAND, NE of, deep crustal struct., evolution of rifted margin, LITHOPROBE results, 88M/2699; Annieopsquotch complex, geol., 88M/2954; Belleoram pluton, geol., 88M/2867; Cape Ray Au deposits, origin of ore metals, hydrothermal fluids in, 88M/0327; Coney Head complex, U/Pb dating, 88M/0035; Cow Head group, Cambro-Ordovician biogenic chert, occurrence, petrol., 88M/2996; Fleur de Lys belt, Proterozoic stratigr., 88M/4370; Grand Banks, S. Whale Basin, vitrinite reflectance measurements, implications for hydrocarbon exploration, 88M/2999; NE Grand Banks, clay min. indicators of geol., geochem. subaerial modification of near-surface Tertiary sediments, 88M/3416; La Poile Bay area, Georges Brook fm., volcanic rocks, Rb/Sr dating, 88M/1644; Mansfield Cove complex, Buchans, Roberts Arm, and Victoria Lake groups, U/Pb dating, 88M/1643; Springdale Group, and correlative rocks, age, evidence for Llandovery overlap assemblage in Canadian Appalachians, 88M/1642; newly recognized Silurian epicontinental-type caldera, geol., 88M/2910; St. George group, Lower Ordovician carbonate rocks, stratigr., interaction between eustasy, tectonics, 88M/4667; Topsoils igneous terrain, episodic Ordovician-Silurian plutonism, 88M/1641

-, NORTH WEST TERRITORIES, Baffin Is., Nanisivik mine, pyrite, morphol., 88M/2626; Baker Lake area, He-U lake anomaly in permafrost, geochem. studies, 88M/0888; Devon Is., Haughton, astrobleme and included biota, fission-track dating, 88M/1653; Dist. of Franklin, Victoria Is., Natkusiak basalts, geol., Cu occurrences, 88M/2912; Dist. of Keewatin, Half Way Hills area, Precambrian geol., 88M/2703; Amer Lake map area, dacite porphyry, U/Pb dating, 88M/1652; quartz syenite intrusion, U/Pb dating, 88M/1651; Dist. of Mackenzie, Devonian outcrop belts, stratigr., 88M/3002; Artillery Lake, Pb-Zn-Cu dist., geol., 88M/1899; Booth River intrusive suite, petrol., 88M/2873; Great Slave Lake, East Arm area, Cu arsenide mins., occurrence, 88M/2630; Husky fm., sedimentol., stratigr., 88M/3001; Mackenzie dyke swarm, geochem., 88M/6213; Yellowknife-Hearne Lake area, geol., segment across Archaean basin, 88M/2702; Fort Norman area, formation of jarosite deposit on Cretaceous shales, 88M/1058; Portman Lake, amazonite, gahnite, sphalerite, occurrence, 88M/2591; Pb/Pb dating, 88M/3247; Slave Province, Yellowknife Bay, succession of quartz veins in Archaean metaturbidites, 88M/1180; Somerset Is., Ham kimberlite, ultrabasic xenoliths from, 88M/4513; Wopmay orogen, Great Bear magmatic zone, 1900-m.y, tectono-magmatic evolution, 88M/0678

-, NOVA SCOTIA, Au-bearing quartz veins, mechanics of formation of, 88M/1177; development potential for offshore placer and aggregate resources, 88M/3562; Antigonish Highlands, Ordovician-Lower Silurian rocks, petrol., 88M/1352; Cape Breton Highlands, geol., 88M/2700; Grenvillian basement, U/Pb dating, contrasting 88M/0037; Chéticamp, metamorphic terrains, 88M/6418; Cape Breton Is., sandstone lithol. in Silver Mine fm., relation to galena occurrence in Yava deposit, 88M/1867; St. Ann's area, polymetallic min. occurrences in volcanic, granitic rocks, geol., age, 88M/1892; Cobequid Highlands, catchment basin anal. applied to surficial geochem. data, 88M/0915; Digby, North Mountain, basalt, models for fissure eruption from stratigr., petrochem., 88M/6208; Eastville, Meguma group metasediments, stratabound Zn-Pb deposit, 88M/1927; Forest Hill Au dist., dispersal of Au and related elems. in tills, soils, 88M/2475; Goldenville metamorphosed interbedded sandstone, slate, sedimentology, 88M/2997; Pb isotope data for Au-bearing veins and host meta-sedimentary rocks, 88M/2182; E. Kemptville area, lithophile elems. and exploration using lake bottom sediments, 88M/0891; Meguma terrain, polyphase late Palaeozoic tectonothermal evolution, evidence from 40 Ar/39 Ar min. ages, 88M/3113; Meguma zone, intrusive rocks, ⁴⁰Ar/³⁹Ar, fission track dating, thermal history, 88M/3244; Sydney coalfield, U content, distribn. in coal samples, 88M/4043; Walton-Cheverie, stratiform baryte in sabkha sediments, 88M/0397

-, ONTARIO, assessing meteoric water compn., relative humidity from ¹⁸O, ²H in wood cellulose, palaeoclimatic implications, 88M/0830; SE, grandidierite, kornerupine, tourmaline, occurrence, 88M/6013; Abitibi greenstone belt, fractionation of Pt-group elems. and Au in komatiites, 88M/0286; Munro township, Archaean komatiite flows, comparative Re-Os, Sm-Nd, Rb-Sr isotope, tr. elem. systematics for, 88M/3965; Alexo, noble metal abundances in komatiite suites, 88M/2272; Atikokan, REE abundances in granitic rocks, fracture-filling gypsum assoc. with deep saline groundwaters, 88M/3844; Beardmore-Geraldton area, gold mineralization, structl. considerations, role of iron formation, 88M/1896; Beardmore-Tashota area, gold mineralization, position in geol. evolution, 88M/1895; Blind River-Elliot Lake basin, geol., genesis of U deposits in early Proterozoic, 88M/5172; Boston Township, unusual Fe-rich basaltic komatiite, petrogr., geochem., 88M/6270; Chalk River area, fracture calcites, isotope geochem., 88M/1973; Dist. of Algoma, East Bull Lake pluton, alteration, fracture-filling mineralogy, 88M/3116; East Bull Lake, anorthosite-gabbro layered complex, multiple alteration events in, evidence from fracture mineralogy, $^{40}\mathrm{Ar}^{-39}\mathrm{Ar}$ dating, 88M/1972; Folson lake fault zone,

complex, cycli anorthosite-gabbro deformation, chem. transport, evidence for seismic pumping?, 88M/1975; East Bull Lake pluton, 87Sr/86Sr values i groundwaters, 88M/1974; Elliot Lake and Athabasca U areas, regional geophys. geochem., 88M/5173; English Rive subprovince, evaluation of biotite-garner geothermometers, 88M/6420; Experimenta Lakes Area, Lake 239, annual supply of 238U, 234U, 230Th, 226Ra, 210Pb, 210Po, 232Th from terrestrial, atmospheric sources 88M/5339; Eye-Dashwa Lakes granite pluton, relative mobility of U, Th, Ra isotopes in weathered zones, 88M/2271 Great Lakes region, Thames River, U budget, partitioning between dissolved and microorganism components, 88M/2399 Province, shear Grenville criteria 88M/2711; Heron Bay, Hemlo deposit. pyrite of distinctive isotopic compn. gold identify potential tool to mineralization, 88M/0869; Hoyle Pond, free C-, carbonate-bearing alteration zone associ with Au mineralization, 88M/0323; James Bay lowlands, and British Columbia, Peace River basin, two Cretaceous coal-bearing sequences, geochem., 88M/0783; Kenora-Kabetogama dyke swarm, Proterozoic, characteristics, 88M/3968; Kirkland Lake area, use of near surface materials in gold exploration, 88M/1868; Kirkland Lake, Kerr-Addison lode Au deposit, hydrothermal alteration zoning, Au concentration, 88M/0657; Lake Huron, N. shore region, Cu deposits, 88M/1894; Lake Nipigon, Middle Proterozoic diabases, picrites, petrol., 88M/1286; Lake Panache-Collins Inlet area, Proterozoic geol., 88M/2701; Lake Superior, N. shore, regional geochem. reconnaissance, 88M/2477; Larder Lake, Cheminis deposit, gold mineralization assoc. with Archaean stratabound sulphides, 88M/1928; Limerick Township, Grenville Supergroup, relationship between rock type, metamorphic grade, fluid-phase compn., 88M/4754; Madoc, Deloro igneous complex, geochem., feldspar mineralogy felsic plutonic rocks, 88M/0740; Michigan and Appalachian Basins, brines, Sr, O, H isotopic compn., 88M/5784; Michipicoten (Wawa) greenstone belt, late Archaean bimodal volcanism, tectonic setting, 88M/2913; Michipicoten Is., Precambrian volcanic glass, anals., 88M/6269; volcanic rocks, palaeomagnetism, U-Pb geochronol., calibration of Keweenawan polar wander track, 88M/2871; Mukoka-Parry Sound region, interplay between folding, ductile shearing in Proterozoic crust, 88M/3115; Munro Township, clinopyroxenes in komatiite, quantitative REE SIMS anals. 88M/5553; Deadman Hill area, komatiites. basalts, geochem., 88M/0741; Newton Township, Archaean low- and high-alumina komatiite, geochem., 88M/5668; enriched komatiitic basalts, genesis by crusta contamination of depleted komatiite magma, 88M/2914; Niagara Escarpment Pb isotope ratios in rocks and galenas implications for primary, secondary sulphide deposition, 88M/2330; Niagara Peninsula, extraction techniques for production of high-specification aggregates from Palaeozoic limestones, 88M/5306; Nipissing, diabase intrusions, petrogr., palaeomagnetic characteristics, 88M/3137; Ottawa, mineralogical variability of clay in map delineation of Brandon soil, 88M/0222; National Museum of Natural Sciences, history, development of min. collection, 88M/4845; Parry Sound, Nobel gneisses McKellar gneisses, Rb/Sr 88M/1647; Rainy Lake-Quetico area, regional geochem. reconnaissance, 88M/2476; Red Lake greenstone belt, geochronol. constraints on timing of magmatism, deformation. gold mineralization, 88M/1650; Sharbot Lake, alteration of phlogopite to corrensite, 88M/0182; Sudbury igneous complex, prograde metamorphism. 88M/4753: Sudbury igneous complex and Onaping fm., feldspar mineralogy, 88M/2594; Thames River, intracellular aragonite crystals in fresh-water alga, 88M/4328; Thessalon region, rhyolites, low-Ti continental tholeiites, geol., geochem., 88M/2270; Thunder Bay, fault-bounded outlier of rocks, 88M/6139; Archaean clastic Timmins, Owl Creek Gold mine, Quaternary stratigr., geochem., 88M/0880; Wawa, auriferous quartz veins in Archaean trondhjemite, alteration pattern, fluid inclusions, 88M/0304; Wawa, Michipicoten greenstone belt, Jubilee stock, U/Pb dating, 88M/1648

-, QUEBEC, rocks, mins., excursion guide, 88M/3166; seasonal, annual variations in organic matter contributed by St Lawrence River to Gulf of St. Lawrence, 88M/2441; SW, co-diagenesis of S, Fe in acid lake sediments, 88M/5734; Abitibi Belt, Blake River group, Archaean wrench fault tectonics, structl. evolution, 88M/1178; late Archaean, evidence for contrasting compositional spectra in comagnatic intrusive, extrusive rocks, 88M/6210; Abitibi, Dest-Or orebody, Au, As, Sb, W distribn., 88M/0867; Aphebian Mistassini group, tourmalinites, formation of, 88M/0984; Cape Smith, development of compositional and textural layering in Archaean komatiites, Proterozoic komatiitic basalts, 88M/1196; granodiorite-tonalite pluton, Rb/Sr dating, 88M/1646; N of Cape Smith fold belt, Proterozoic to early Archaean rocks, Rb/Sr dating, metamorphic history, 88M/0036; Casa-Berardi Au area, till sampling, case history in orientation, discovery, 88M/0882; Chapais, Opemisca terrestrial-shallow Archaean, marine transition, 88M/2998; Chibougamau Archaean sequence, palaeogeographic, palaeotectonic response to magmatic processes, 88M/4512; Circum-Ungava belt, U in, new information, 88M/1893; Eastern Townships, Philipsburg-Sutton region, glacial dispersal of pillow-lava boulders, 88M/1436; Evans-Lou pegmatite, moydite, new min. species, 88M/1093; Gaspé, McGerrigle plutonic

complex, evidence of magma mixing, hydridization, 88M/2869; McGerrigle thermal aureole, biotite, cordierite, chemographic relationships, 88M/4752; Mont Albert, harzburgite massif, 88M/3114; eclogite, retrograde geothermometry, 88M/6419; Gatineau, fluorapatite and assoc. mins. from skarn, chem. compn., 88M/6075; Grenville Province, central metasedimentary belt, Precambrian syenitic plutons, petrol., 88M/2870; Lac Brisson, unusual peralkaline granite, 88M/2868; Monteregian and White Mtn. alkaline suites, comparative amphibole chem., 88M/2571; Mont-Laurier, petrogr., petrochem., min. assocns. of selected rocks and radioactive occurrences, 88M/2184; Mt. Saint-Bruno, weathering of igneous pyroxenite, geochem. evolution, 88M/0197; central Noranda area, Archaean felsic metavolcanic rocks, geochem., origin, 88M/5666; Oka complex, Nd, Sr isotope systematics, bearing on evolution of sub-continental upper mantle, 88M/5667; Otish and Mistassini Basins, hydrated U mins. as clues on Archaean weathering processes, 88M/0593; Richmond area, Tibbit Hill, volcanic rocks, tectonic significance, geochem. evidence, 88M/2269; Rouyn-Noranda, Flavrian batholith, gold distribn., 88M/3964; Sept-îles, layered mafic intrusion, palaeomagnetic study, 88M/3142; St-Urbain, calcic myrmekite, poss. evidence for involvement of water during evolution andesine anorthosite, 88M/1009; Superior Province, Lacorne complex, proposed model for formation of reversely zoned plutons, 88M/6215; Thetford Mines complex, Lac de l'Est, ophiolitic volcanic rocks, geochem., petrogenesis, 88M/2955; Val-d'Or, stratigr., structl. relationships, implications for gold prospecting, Val ď Or, 88M/5236: Malartic. Chibougamau, biotite from gold deposits, geochem., 88M/2577

-, SASKATCHEWAN, Athabasca Basin, geochem. signatures of U deposition, 88M/2334; near-surface lithogeochem. halo as aid to discovery of deeply buried unconformity-type U deposits, 88M/0868; non-crystalline inorganic matter-humic complexes in oil sand, relationship to bitumen recovery, 88M/2442; U deposits, geol., genesis, 88M/5171; Claggett, marine palaeoenvtl. geochem., cyclothem, 88M/0784; Cypress Hills, U and other tr., minor elem, concentrations in surface rocks, stream sediments, 88M/2333; Flin Flon-Snow Lake belt, gold occurrences, prelim, investigation, 88M/1898; Prairie Evaporite fm., Rb-Sr, K-Ca isotope systematics in mins. from K horizons, 88M/4044

—, YUKON TERRITORY, Devonian outcrop belts, stratigr., 88M/3002; Anvil Range, stratiform Zn-Pb-Ag deposits, S, Pb isotope studies, 88M/0656; N. Cassiar terrain, 2200 m.y. age of zircons in Upper Proterozoic clastic rocks, 88M/3246; Emerald Lake pluton, petrol., chem., K-Ar, Rb-Sr, U-Pb study, 88M/2874; Jason deposit, stratiform

Pb-Zn sulphide deposits, mudflows, turbidites, Devonian sedimentation along submarine fault scarp, 88M/0358; Ross River and Watson Lake areas, blueschist, eclogite, in mylonitic allochthons, 88M/3118; Selwyn Basin, anoxic stratified oceans as S source in sediment-hosted stratiform Zn-Pb deposits, 88M/3995; genetic model for stratiform baryte deposits, 88M/1869; TEA baryte deposit, Au distribuin, 88M/2186; Tombstone Mts, Au-Cu-Bi mineralization in hedenbergitic skarn, 88M/5291

Canaphite, pyrophosphate groups in struct. of, first occurrence of condensed phosphate as min., 88M/6082

Canary Islands v. Spain

Cannizzarite, new data, 88M/4320

Carbohydrate, and lignins in anoxic fjord, comparative geochem., 88M/4152

Carbon, activated, XRF detn. of Mo, As, U in, 88M/4951; anal. of ancient sediments for total organic C, 88M/0080; anal. using layered synthetic microstructs., 88M/3313; C/3He in volatile fluxes from solid Earth, implications for C geodynamics, 88M/0592; melting at 50 to 300 kbar, 88M/5402; models for C, S cycles, atmospheric O, application to Palaeozoic geol. history, 88M/2284; USA, California borderland basins, benthic fluxes, cycling of, 88M/0837

- compounds, CO₂, atmospheric, feedbacks between weathering and, over last 100 m.y., 88M/5684; deep-ocean metabolic CO₂ production, calculations from ETS activity. 88M/5776; effectiveness of ocean's biol. pump in global CO2 scenarios, 88M/4078; hybrid model of CO2 geochem. cycle, application to large impact events, 88M/0599; poss. goethite-iron(III) carbonate solid solution and detn. of CO2 partial P in low-T geol. systems, 88M/5565; role in geothermal systems, 88M/6230; Czechoslovakia, deep-seated, problem of origin, 88M/2382

hyperfiltration-induced isotopes, fractionation of, 88M/0816; ¹³C, depletion of, in lignin, implications for stable C isotope studies, 88M/2420; ¹⁴C beta track technique, evaluation of, implications for solubilities, partition coefficients determined by, 88M/1695; 14C in Earth System, 88M/5523; Canada, Labrador, Lake Melville, organic C isotope ratios, palaeoenvtl. implications for Holocene sediments, 88M/4150; tropical Indian Ocean, bomb-radiocarbon, penetration of, measured by AMS, 88M/5328; USA, California, Mono Lake, radiocarbon budget, unsolved mystery, 88M/5343; radiocarbon dating v. age determination

—, organic, Cd/Ca in late Miocene benthic foraminifera and changes in global organic C budget, 88M/4146; degradable, in deep-sea surface sediments, estimates from ¹⁴C concentrations, 88M/2454; in marine sediments, 88M/5893; *NW Atlantic continental margin*, organic C oxidation, preservation in sediments, 88M/2453; *New Zealand, South Island*, dissolved, in streams, rivers, spectrophotometric detn.,

- 88M/5909; South America, Amazon River and estuary, sources, transport of particulate organic C, 88M/4167
- Carbonaceous matter, in mantle xenoliths, compn., relevance to isotopes, 88M/2264
 rocks, geochem., 88M/5685
- Carbonate, marine Ca-Mg, coprecipitation of Sr with, 88M/2645; metastable Ca-Mg, synthesis, 88M/3766; shell, of desert land snails, C, O isotope compn. of, 88M/3865; Australia, Groote Eylandt, Mn-, in sedimentary Mn deposit, 88M/2643; Bulgaria, Madan ore region, Erma-reka sector, gas-liquid inclusions in, 88M/0294; France and Belgium, isotopic geochem., 88M/4018; Japan, Ryukyu Islands, fluctuation in ocean sediments, 88M/2319
- cement, petroleum biodegradation as source of ¹³C-enriched CO₂ in formation of, 88M/3989
- concretions, England, Norfolk, Recent oxidized, in reduced intertidal, sandflat sediments, akaganéite occurrence in, 88M/2620
- geochemistry v. geochemistry, carbonate
- mineralization, Germany, Stockheim Trough, min., geochem., envtl. anals. of Permian clastic, volcaniclastic sediments, 88M/4023
- minerals, alkali, α-β-phase transitions of, 88M/5159; pedogenic, identification using stable C, O isotopes, XRD, SEM anals., 88M/3385; Botswana, Okavango Delta, evaporites, accumulation on islands, 88M/1422; ν. also individual carbonate minerals
- oxides, Papua New Guinea, Misima Is., structurally controlled epithermal mineralization assoc. with, 88M/5269
- --- rocks v. sedimentary rocks, carbonate
- sediments v. sediments, carbonate
- systems, binary rhombohedral, theoretical anal. of cation ordering in, 88M/0539
- Carbonatite, alkali-poor, liquid immiscibility and origin of, 88M/2027; and carbonate metasediments. isotopic interactions, 88M/2344; and kimberlites, interrelation of, problems of deep formation of magma, 88M/2850; early calcite, characteristic features of development of magnesian metasomatism in, 88M/4684; fergusonitebearing, U in mins. of, 88M/3866; geochem., isotopic systematics implications for evolution of oceanic-island sources, 88M/3918; mantle metasomatism and, exptl. study of complex relationship, 88M/4419; petrol., 88M/2786; transfer of subcratonic C into, 88M/1212; E Africa, Nd. Sr isotopic compns. of, implications for mantle heterogeneity, 88M/0719; Malawi, Province, lithosphere metasomatism, petrogenesis, 88M/4491; Norway, Fen complex, hematite-, wholerock major and tr. elem. data, model for evolution of, 88M/2345; N Pakistan, age, nature of emplacement, 88M/4900; Zambia, Kaluwe complex, volcanic, petrol., 88M/4490
- complexes, Algeria, Ahaggar, In'Ouzzal nucleus, Archaean, min., geochem. data, 88M/5637; W Greenland, Qaqarssuk, Nb, P

- dispersion in soil overlying, 88M/0881; Norway, Fen complex, mantle, crustal components in, 88M/0698; Pb isotope geochem., age, petrogenetic implications, 88M/3919; USA, Arkansas, Cretaceous, isotopic relationships, 88M/4431
- magma v. magma, carbonatite
- zones, metasomatically dolomitized, carbonate relationships in, 88M/6368
- Carbonic inclusions, *India*, *Tamil Nadu*, *Nilgiri*, from charnockite massif, 88M/1495
- CARIBBEAN SEA, Cariaco Trench, REE distribn. in anoxic waters, 88M/5847; Grenada Basin, clay min. sources, 88M/3417
- Carnallite, and bischofite, development of microstruct. during deformation of, in transmitted light, 88M/0515
- CARPATHIAN MTS., Banater, ore deposits, classification, 88M/3538; Bîrgău Mts., Măgura Ilvei struct., geol., geochem., metallogenesis assoc. with Neogene subvolcanites, 88M/6178; Outer Western, selected rock types of teschenite assocn., petrol., geochem., 88M/4477; Pieniny Klippen belt, Miocene andesite intrusions, K/Ar dating, 88M/0017
- CASPIAN SEA, amino-acids in sediment cores, 88M/4139; marginal areas, S isotope compns. evaporites, 88M/0770
- Cassedanneite, USSR, Urals, Beresovsk, new min., 88M/6086
- Cassiterite, crystal morphol. as criterion in commercial evaluation of tin ore deposits, 88M/0291; e.p.r. of new Fe3+ centre in, 88M/5135; e.p.r. study of symmetry of Fe³⁺ sites in, 88M/5134; England, Cornwall, wood tin, occurrence, nature, genesis, 88M/6049; St Agnes, Wheal Coates, pseudomorphs after orthoclase, 88M/1565; granite, Beauvoir columbotantalates, interrelations, evolution of, 88M/4289; Morocco, Zaër granite, Sokhret Allal, zoned, from W-Sn deposit, chem. compn., 88M/4290; South Africa, Bushveld complex, from tin deposits, origin of colour zoning in, 88M/2610
- deposits, Germany, Bavaria, Büchig, 88M/5250; Malaysia, in stream, elimination of hydraulic effects, 88M/0887; Spain, Salamanca, Golpejas, placers, anomalies in, 88M/5193
- --- silicate-sulphide metallization, evolution of bismuthian, stibian mineralization in, 88M/4313
- -- sulphide ore deposits, USSR, Yakutia, Dyakhtardakh, occurrence of leached ores in cryogenic zone of oxidation, 88M/0293
- Cave deposits, carbonate, *Europe*, deuterium content of palaeowaters inferred from isotopic compn. of fluid inclusions trapped in, 88M/5878
- Celadonite, Mössbauer spectra, 88M/1807; USA, California, Point Sal ophiolite, compositional, structl. variations of phyllosilicates, 88M/6032
- Celestine (celestite), decorating natural faces of mins. with anthraquinone, 88M/1510;

- origin in deep-sea carbonate sediment 88M/4324; Austria, Katschberg road tunne, occurrence, 88M/6474; Leogan; Inschlagalm, new occurrence, 88M/1574; Pacific Ocean, Acantharian fluxes, Sr t chlorinity ratios, 88M/2397; Spain Barcelona province, Plana de Via replacement of Sr by Ba in, 88M/4821 USA, Illinois, Hardin County, Harris Creen fluorspar dist., occurrence, 88M/6479 Ohio, Salina group, replacements devaporites, 88M/3006
- Cellulose, accurate zinc charcoal reduction system for D/H measurements of water and 88M/3285; Canada, Ontario, wood assessing meteoric water compn., relative humidity from ¹⁸O, ²H in, palaeoclimatic implications, 88M/0830
- Celsian v. feldspar
- Cements, chem., geochem. basis for immobilization of radioactive waste materials in, 88M/3637; v. also carbonate cements and limestone cements
- CENTRAL AFRICAN REPUBLIC, U/Plevidence for Pan-African granulite facies metamorphism, 88M/0024
- CENTRAL AMERICA, CENTAM, data base of volcanic rocks, 88M/2918; intra-eruption changes in compn. of mafic to intermediate tephras, 88M/2926
- Ceramic materials, correlations between wate sorption and other props., 88M/1724; fifteer ceramic phases, XRD powder patterns 88M/1011; surface characterization using variety of techniques, 88M/4920; *Mexico* archaeometric study, 88M/4860
- Cerium, France, Haute Vienne, Bernardan occurrence in uraniferous mineralization 88M/0629
- Ceruleite, England, Cornwall, new locality, IR spectroscopy, 88M/1041
- Cerussite, heterogeneous, epitaxial nucleation of protein crystals on min. surfaces 88M/6031; Germany, Hesse, Altenmittlau occurrence, 88M/4808; USA, Illinois occurrence, 88M/6478
- Cesplumtantite, new Cs-Pb tantalate from granite pegmatites, 88M/1085
- Cetineite, and synthetic Na analogue, crysta struct., 88M/5146; *Italy, Tuscany, Cetini mine*, new Sb-oxide-sulphide min. 88M/1086
- Chalcedony, detn. of crystallinity, 88M/2601 Japan, Fukui Pref., Mino Terrain length-slow, in Palaeozoic-Mesozoic strata geol. significance, 88M/2990; v. also quartz
- , chrysoprase, occurrence, chem., 88M/2105, flint, stable perinaphthenyl radicals in 88M/5885
- Chalcocite, ferroelectricity in natural sample of, 88M/4771; USSR, Udokan, from Claposit, electrochem. characteristics 88M/4312
- Chalcomenite, Ireland, Co. Kerry Ballybunnion, occurrence, 88M/1568
- Chalcopyrite, coexisting with stannoidite, i tin ore, mineralogy, texture, physicochem envt. of formation, 88M/0619; disease i sphalerite, pathology, epidemiology 88M/1048; exptl. deformation of single crystals at 200°C, 88M/0513; mechanism of the control of th

rimming of, around sphalerite during retrograde metamorphism, 88M/2627; sulphidation of, study on interaction between chem. and textural changes in sulphide system, 88M/2041; Greece, E. Peloponnesos, Ermioni Cu-bearing pyrite mines, metallogeny in basic rocks of palaeosubduction area, 88M/1914; USA, Colorado, Grizzly Bear mine, occurrence, 88M/4835

Chalk, France, Champagne, movement of water in unsaturated zone in, isotopic, chem., study, 88M/5868; North Sea, diagenesis, effect on reservoir location, props., 88M/6315; Central Graben and Danish sub-basin, Cretaceous, O, C isotope compns., 88M/2296; Greater Ekofisk area, late Cretaceous, early Palaeocene, sedimentation, 88M/1411

Chamosite v. chlorite

CHANNEL ISLANDS, Jersey, La Tête des Hougues, Rozel conglomerate fm., processes of alluvial fan sedimentation, 88M/6322

Charnockite, *India, Kerala*, progressive charnockitization of leptynite–khondalite suite, evidence for formation of charnockites through decrease in fluid *P*, comment, 88M/4731, reply, 88M/4732; *Ponmudi*, prograde formation, 88M/1493; *Tamil Nadu, Nilgiri*, carbonic inclusions from, 88M/1495; *S India*, C isotope compns. of fluid inclusions in, 88M/5755; *S India* and *Sri Lanka*, arrested formation, 88M/1492

Charoite, *Germany*, new min. occurrences, 88M/6475

Chekhovichite, USSR, Armenian ASSR and Kazakhstan, new min., 88M/6087

Chert, laminated, biogeochem. model, simulation of effect of Precambrian algae in formation of, 88M/0754; E. Antarctic ice sheet, Elephant Moraine, extreme ¹⁸O depletion in, 88M/5574; Canada, Newfoundland, Cow Head group, biogenic, Cambro-Ordovician, occurrence, petrol., 88M/2996; India, Karnataka, Sandur schist belt, Archaean, silicified cyanobacteria from, 88M/0773; Jordan, tripolization of, 88M/2985

Chevkinite/perrierite, exptl. crystallization from *REE*-enriched silicate liquids at high *P*, *T*, 88M/2070

CHILE, K-Ca exchange on inorganic clay fractions of soils, 88M/4999; late Palaeozoic granitic rocks, Rb/Sr dating, 88M/1658; manto type Cu deposits, review, 88M/1902; S isotope reconnaissance of porphyry Cu and manto-type deposits, 88M/2191; N, and outer Melanesia, min. deposits, metallogenesis, comparative review, 88M/5243; N, Landsat TM imagery, dentification, spectral characteristics of 88M/5242; alteration, hydrothermal petrol., N-central, plutonic rocks, 88M/2879; Altiplano of Antofagasta, upper Cainozoic igneous rocks, geochem. studies, 88M/2282; Andes, crustal contribus. to arc magmatism, 88M/5682; Calabozos caldera, hydrothermal system, 88M/1372; La Pacana caldera and Atana ignimbrite, major ash-flow, resurgent caldera complex,

88M/1370; Salar de Gorbea, hydrothermal alteration zones, S deposits, in Cainozoic 88M/5244; volcanoes, Andes. Pedro-Pellado volcanic complex, crustmagma interactions, evolution of arc magma, 88M/0751; Chañaral mélange, Palaeozoic, origin, 88M/6433; El Teniente and Rio Blanco porphyry Cu deposits, quartz, anhydrite, sulphide mins., O, S isotopic compns., 88M/2142; Jardin deposit, strata-bound Cu-Ag sulphide mineralization assoc. with rhyolitic volcanic rocks, 88M/0394; Lascar volcano, use of Landsat Thematic Mapper to detect, monitor active volcanoes, 88M/1371; Patagonia, Andes, geol., 88M/2708; Puchuldiza and Tuja hot springs, geochem., 88M/6280; S. coastal Cordillera, Palaeozoic ophiolitic belt, metallogenic, tectonic characteristics, 88M/6307; southern Cordillera, Cretaceous diapiric plutonism, 88M/1657

CHINA, Cainozoic volcanoes, tectonic setting, 88M/6246; chondritic meteorites, noble gases, 81Kr-Kr ages, 10Be, 88M/2520; dissolved Cd behaviour in estuaries, consequences for Cd supply to ocean, 88M/3625; formation of Hanxing type iron deposits in light of alteration mineralogy, 88M/1924; geomagnetic intensity evaluated from ancient pottery, 88M/1543; mantle xenoliths from kimberlites, 88M/2747; strata-bound Iceland spar deposits, TL study, 88M/1518; strata-bound ore deposits, discussion on formation mechanism, fluid inclusion approach, 88M/0298; summary of lithospheric dynamics, 88M/1590; types, metallogenic models of Ni-sulphide deposits, 88M/3552; zoned olivine in basic-ultrabasic rocks, study, 88M/4240; N, Carboniferous bauxite, sedimentology, 88M/1429; NChina platform, belt, geol.-tectonic polymetallogenic evolution, tectonic control, 88M/1890; N margin of N China Diwa, tectonic activation, U mineralization, 88M/1866; NE, Cainozoic volcanic rocks, geochronol., 88M/3234; E, clinopyroxenes in mantle-derived inclusions in Cainozoic basalts, min. chem., geol. significance, 88M/4254; H, O isotopic compns. of meteoric waters, 88M/5823; low P clinopyroxenes in Cainozoic basalts, main characteristics, petrol. significance, 88M/4255; mantle xenoliths and alkali-rich host rocks, 88M/2746; physicochem. processes involved in Cainozoic volcanism, 88M/2906; SE, Hercynian-Indosinian granitic rocks, distribn., geochem. features, 88M/2861; S, application of partial melting model to study of petrogenesis of granitic rocks, 88M/6194; late Precambrian banded iron formations, stratigr., type, formation condns., 88M/5203; organic matter and relation with U mineralization carbonate-type U deposits, 88M/5590; U ore deposits in granitic rocks, H, O, S, Pb isotope studies, 88M/5588; Anhui Province, genetic types, related mineralization process of granitic rocks, 88M/3553; Guichi, Tongshan Cu deposit, skarns, REE

geochem., 88M/0644; Bayan Obo, iron deposit, hydrothermal, metasomatic processes, 88M/0642; Dachang ore field, ore-forming condns., S isotopic systematics, thermodynamic anal., 88M/2001; Dongpu basin, organic geochem. anal. of sedimentary envts., 88M/0852; Emeishan, pyroxenes in basalts, study, 88M/6019; Fangshan, granitic intrusion, O, H, C isotope studies, 88M/3950; Fujian province, Xikeng, granitic pegmatites, rock-forming, ore-forming characteristics, 88M/2862; Guangdong province, Dabaoshan, polymetallic deposit, genesis, 88M/3597; Shaoguan dist., ore-forming processes and dissipative structs., 88M/3902; Guangxi Province, Beishan, zincblende-pyrite deposit, stable isotope geochem., 88M/2168; Dachang ore field, jamesonitegroup mins., new advances in study of, 88M/5260; Darongshan, S-type granite suite, petrol., 88M/4504; Jiuwandashan-Yuanbaoshan area, tin polymetallic deposits, geol. features, minerogenic series, 88M/5204; Guizhou, fine-grained gold deposits, geol. characteristics, genesis, 88M/2171; Hannuoba, high-P hydrous min. assocn. in lherzolite, 88M/6195; Hebei Province, Sugiao area, discrimination of coal-generated gases, oils, 88M/5911; Heilongjiang province, Dongfenshan, Au deposits in Precambrian banded iron formations, 88M/0381; Henan Province, clay mins., REE, Li, in clay rocks, prelim. study, 88M/1720; late Archaean greenstonegneiss terrain, age, tectonic setting, 88M/4902; Huanghua Sag, Banqiao genesis of Depression, condensate. 88M/5912; Hubei Province, Shennongjia region, glaciogenic rocks, characteristics, 88M/1430; W Hunan, heavy metal distribn., status, in soils in sub-tropical zone, 88M/2317; stratabound scheelite deposits, geol., mineralization, 88M/5205; Inner Mongolia, Bainaimiao ore field, tectonogeochem. of superimposed mineralization, 88M/0643; Jiashengpan Pb-Zn-S ore belt, geol, setting, genesis, 88M/0379; Inner Mongolia, Tianpishan pegmatite, H, O, C isotope studies on genesis of, 88M/2241; Jiangsu Province, Anjishan, convection, crystallization in intrusive body, 88M/4502; Donghai dist., Mg-rich staurolite in garnetcorundum rocks, eclogite, 88M/6005; Jiangsu Province, Jurong Basin, light hydrocarbons (C₁-C₇) in Mesozoic, Palaeozoic rocks, characteristics, 88M/2433; Jiangxi Province, metallogeny, magmatism, struct., new interpn., 88M/0349; two types of granitic rocks, REE geochem. characteristics, metallogenic significance, 88M/0731; Pingle depression, diagenetic transformation of Permian sepiolite, relationship with coal metamorphism, 88M/0209; Xihuashan, relation between evolution of granite mineralization of vein-type W deposits, 88M/3903; relationship of alkaline metasomatism to W mineralization, 88M/2169; Xihuashan, W deposit, fluid inclusion study, 88M/3594; Jiangxi

Province, Yinshan, discussion mechanism of Pb, ZN, Cu metallogeneses, 88M/0380; Jilin Province, Mt. Qixingshan, Cainozoic basaltic rocks, petrol., petrogenesis, 88M/4578; Xiaoyangqiao area, glauconite in Cambrian-Ordovician profile, min. study, 88M/6033; Kelamayi oilfield, identification of bicyclic alkanes from steroid precursors on crude oils, 88M/4144; Laili Mt., blind tin ore deposits, statistical prediction, 88M/0352; Liaoning Province, Jianping County, Cu-descloizite, new discovery, 88M/4304; Longmenshan, Cu deposit, geol. characteristics, ore-controlling factors, 88M/5256; Meishan iron deposit, study on migration of iron-rich magma, 88M/3596; Nanjing, silicification Permian calcareous algae, 88M/4662; Nanling region, granite bodies related to tin polymetallic deposits, REE geochem., origin, 88M/5650; Pangushan, tellurobismuthinides, in W-Bi deposits, 88M/5261; Panxi rift and adjacent area, evolution of tectonic stress field in, with ref. to superimposition faulting, 88M/6125; Panzhihua-Xichang area, lavered intrusions, magmatic types, genesis, 88M/1280; Qaidam basin, Dadong palaeolake, formation, evolution, disappearance of, 88M/2989; Qinghai, Chaidamu basin, salt samples from salt playa, 10Be distribn., U-series dating, 88M/2316; Qingyuan granite-greenstone terrain, dating, 88M/3235; E. Qinling nonferrous metallogenic belt, geochem. studies on ore-hosting strata, 88M/5589; Shaanxi province, Feng-Tai ore field, fossil erosion surface, control of palaeo-struct. in mineralization strata-bound Pb-Zn deposit, 88M/3595; Jinduicheng, porphyry Mo deposit, distribn. pattern, origin of ore-bearing fissures, 88M/1923, geol. features, origin, 88M/2170; Shaanxi, Taiyuan area, 234U/238U ratios in groundwaters, 88M/2390; Shandong province, Laixi-Pingdu area, characteristics of granulite facies rocks, 88M/3100; Laixi-Pingdu area, metamorphic characteristics of granulite facies rocks, 88M/4741; Linglong and Guojialing batholiths, isotopic ages, geol. implications, 88M/3236; Shandong, Yinan County, Jingchang Au-Cu deposits, deformation, hydrothermal mineralization, 88M/0306; Shanghaihuan, polyphase granitic gneisses, Rb/Sr dating, 88M/0032; Sichuan Province, Precambrian metamorphic terrain, petrol., 88M/4742: Songliao Plain, background values of REE, U, Th in soils, 88M/5720; Taiping-Huangshan batholith, relationship between compns. and unit-cell parameters of biotites, 88M/0999; Taolin, Zn-Pb-fluorite deposit, example of problems in fluid inclusion research on min. deposits. 88M/1922; Tengchong county, Xinggi, granite, petrol., 88M/4503; Tengchong geothermal area, surface hydrothermal mins., distribn., 88M/1456; Tibet, Dongiao-Xainxa ophiolite, petrol., evidence for formation in supra-subduction 88M/1391; Luobosa, podiform chromite

genesis, 88M/1028; Xigaze deposit, ophiolite, ultrabasic rocks, petrol., texture, constraints for mantle struct. beneath slow-spreading ridges, 88M/6293; Xizang, Gangdese Belt, rapid early Miocene acceleration of uplift, bearing on accommodation mechanisms of India-Asia Yangbajain 88M/3232; collision, geothermal field, fluids in, geochem., 88M/5851; S Tibet, plutonic belts, time magmatism, relationships between tectonics, metamorphism, new K-Ar data, 88M/3231; central Tibet, nature of upper crust, 88M/3147; Tongbai-Dabie collision type orogenic belt, large thrust-décollement struct., evolution, 88M/4856; Wanshan Hg ore dist., sedimentary genesis of Hg substance, 88M/2172; Xiamen harbour, concn., distribn. of tr. metals in surface waters, 88M/3634; Xiaosigou porphyry Cu-Mo polymetallic deposits, formation condns., 88M/0351; Xinjiang, gem tourmaline, fluid inclusion study, 88M/5505; Altay pegmatite mine, ertixiite, new min., 88M/1088; Xinjiang, Junggar, Alpine-type ultrabasic rocks, genesis, evolution, 88M/1279; Xisha Archipelago, Yongxing Is., Tertiary reef rock, 88M/1428; Yanshan orogeny, zircon from two diff. mineralized granite types, typomorphic characteristics, 88M/4242; Yellow River, marine dispersal, deposition of silts by gravity-driven underflows, 88M/6338; Yendonggou, Pb-Zn-Ag deposit, geochem., genesis, 88M/5591; Yingtang fm., U deposit, hydrothermal superimposition, transformation ore-forming processes, geol. features, 88M/5257; Yinshan Mts., Precambrian metamorphic rocks, Rb/Sr 88M/3233; Yunnan Province, Tengchong, volcanic rocks, K/Ar dating, Sr isotopic compn., 88M/1627; Sn-granite, relation to mineralization, 88M/3904; Tengchong geothermal area, thermal waters, geochem., 88M/2391; Zhaitang, Malan loess, TL dating, 88M/0031; Zhejiang province, Shaoxing-Longquan uplift zone, geochem. studies of formation of gold deposits, 88M/5592; Zhilingtou, Au-Ag deposit, physico-chem. condns., ore-forming process, 88M/1925; Zhongtiao Mts., early Proterozoic Cu deposits, mineralization, evolution, 88M/0350; Zhongyuan-Huabei oil-gas area, coal-type gas, geochem. characteristics, 88M/2434

- Chlorine, Canadian Shield, halogen-bearing mins. in plutonic rocks, poss. source of Cl in saline groundwater, 88M/3821
- isotopes, ³⁶Cl, in diverse natural samples, tandem-accelerator mass-spectrometry measurements, 88M/5934
- Chlorite, 1a, re-evaluation of ordering local charge-balance in, 88M/1801; Al-, as hydration reaction product of andalusite, new occurrence, 88M/6035; aluminous, and water, H-isotope exchange between, exptl. study, 88M/0563; and biotite, Sc partition between, as indicator of crystallization *T*, 88M/0604; and kaolinite in natural, artificial mixtures, methods of differentiation, 88M/3348; compn. as function of S, O

88M/2073 study, fugacity, exptl. equilibrium in chem. diagenetic, 88M/6036; ⁵⁷Fe Mössbauer spectroscopic anal., 88M/5111; flow behaviour of suspensions in the presence of organic additives, 88M/1729; from hydrothermally, altered rocks and hydrothermal ore deposits, compositional differences in, 88M/4272; from Ni deposits, solubility of, 88M/5183; H diffusion in, 88M/0563; IR spectral datas as proximity indicators of volcanogenic massive sulphide mineralization, 88M/5558; Greece, Skiros Is., and coexisting phengite: from low grade rocks, distribn. of elems. between, 88M/4264; Italy, Sabatini volcanic dist., SH2 deep well, contact metasomatic and hydrothermal mins., 88M/1452; Poland, Lower Silesia, Zabkowice Slaskie, mins. intermediate struct. chlorite-88M/1740; USA, vermiculite, origin, Alabama, Talladega County, occurence, 88M/0395; California, Point Sal ophiolite, compositional, structl. variations of phyllosilicates, 88M/6032; Texas Gulf Coast, authigenesis, 88M/0187

- —, baileychlore, new min., Zn end member of trioctahedral series, 88M/6085
- —, chamosite, chamositic granules., origin of, 88M/2957
- ---, clinochlore, monoclinic ferroan, struct. refinement, 88M/0258
- —, leuchtenbergite, Hungary, Sopron region, in metamorphic rocks, genesis of, 88M/3083
- -- -- biotite-muscovite geobarometer, recalibration, 88M/0558
- quartz assemblages, England, Cumbria, Keswick, stability of, 88M/1002
- Chloritoid, Italy, Cottian Alps, Monviso,
 Cr-rich Mg-, first record in high-P
 metagabbros, 88M/0979; South Africa,
 Witwatersrand goldfields, fluid infiltration
 during metamorphism, generation of,
 88M/6412; N Wales, from low-grade pelitic
 rocks, 88M/6386
- hornblende assemblages, Canada, Grenville province, central metasedimentary belt, in quartz-muscovite pelitic rocks, 88M/0990
- Chlorophoenicite, magnesium-, powder XRD data of, 88M/4302
- Chromans, mono-, di- and trimethyl 2-methyl-2(4,8,12- trimethyltridecyl), identification of, occurrence in geosphere, 88M/2422
- Chromatography, ion, simultaneous detn. of common anions by, lab. method No. 9/22, 88M/1677; liquid, elem.-specific detectors for, detn. of As compounds, 88M/3292
- Chromite v. spinel
- Chromitite, Oman, ophiolitic, deformation fabric, microstructs. in, 88M/3592; Philippines, Central Palawan, systematics, 88M/2179; South Africa, Bushveld complex, Au, Ir, Ni, Co in, 88M/0720; Taiwan, Heng-Chun, 'ferritchromit' from, STEM study, 88M/5139
- Chromium, New Zealand, Manukau Harbour, in sediments, 88M/5333; USA, Wyoming, geol., occurrence of critical strategic metals, 88M/3563

- compounds, Cr iodine boracite, cubic struct., 88M/1840; oxides, α-Cr₂O₃, atomistic simulation of defect structs., ion transport in, 88M/5407
- ions, Cr³⁺, in Al sites in mins., local relaxations around, 88M/5082
- minerals, chromium sulphate pentahydrate, electron density in, 88M/5156
- bearing materials, extractionspectrophotometric detn. of tr. P in, 88M/0078
- -- nickel ores, Spain, Málaga, in ultrabasic massifs, characterization, 88M/1879
- Chrysoberyl, high-T crystal chem., 88M/1513; thermodynamic parameters of, 88M/0457; India, Orissa, occurrence, 88M/4824; Sri Lanka, Pattara, -bearing pegmatite, 88M/2104; Sri Lanka and Brazil, gemstone, descrptn., 88M/0586
- —, alexandrite, gemstone, descriptn., 88M/2109; gem trade lab notes, 88M/5517; Inamori synthetic cat's-eye, 88M/5514

Chrysotile *v*. serpentine

Chrysoprase v. chalcedony

Churchite, *USSR*, *Kazakhstan*, from weathered metamorphic rocks, 88M/1076

Citrine v. quartz

Clay, brick, evaluation of reserves, 88M/5296; catalytic action of, on polymerization of styrene, 88M/0115; ceramic, correlations between props., 88M/3371; characterization of overgrowth structs. formed around clay particles during early diagenesis, 88M/0160; chem., (book), 88M/0090; chem., mass spectrometric anal. of volatiles derived from, 88M/4994; cyclic swelling of, 88M/1734; discovery of primitive clay precursors on alkali feldspar, 88M/1768; dispersed from aggregates, effect of exchangeable cation, electrolyte concn. on mineralogy of, 88M/3375; experimentally deformed, shear-zone geometries in, influence of water content, strain rate, primary fabric, 88M/6102; fireclay refractories in pyrometallurgical processes, 88M/1736; in engineering geol., (book), 88M/4962; results of anals. of two samples used in production of insulation materials, 88M/1737; short-range order, occurrences, use in pollution control, 88M/5337; sorption of 8-hydroxyquinoline by, 88M/4989; tr. elems. in, 88M/1719; Belgium, nonrefractory, min., chem., phys. props., 88M/3398; Chile, K-Ca exchange on inorganic clay fractions of soils, 88M/4999; Pacific Islands, for brick-making, study of suitability of soils, 88M/5044; Pakistan, Attock Dist., Kala Chitta Range, bauxitic, min. study of industrial utilization of, 88M/1756; Poland, fireclays, suitability in production of acid-proof materials, 88M/5008; Ksieginki, weathering product, from nephelinite quarry, min., geochem. characteristics of, 88M/3405; 'Turów' brown coal mine, props. of, suitability for manufacture of refractories, 88M/5009; Poland, Wrocław, Poznah, microstructs. of, 88M/0158; Portugal, Bragança region, limited industrial use, 88M/5017; Sardinia, Nurallao and Laconi, refractory, geol., min., chem. study, 88M/1757; Syria, Golan

- Heights, red, interbedded with basalts, origin, 88M/1762; Turkey, sorption/desorption of Cs on, 88M/5010
- bricks, notes on firing colour of, 88M/0152
- diagenesis, England, Kimmeridge Clay fm., and organic maturation, relationship between, 88M/5015
- materials, complex technologies for producing Al oxide, iron, Ti oxide, cementing binder from, 88M/3391
- mineral deposits, Poland, N. Sudetic syncline, sedimentation of Santonian rocks, potential for, 88M/0173
- mineralogy, Roentgen, von Laue, the Braggs, XRD and development of, 88M/0122

minerals, activated with sulphuric acid,

- titration, 88M/1731; aluminosilicate, kinetic study of Al adsorption by, 88M/3380; and origin of life, (book), 88M/0091; assoc. with vein-type mineralizations, min., geochem., REE, K/Ar ages, 88M/3993; changes in physico-chem. props. by reducing extraction reagents, 88M/3372; chem., (book), 88M/0090; clay-assisted photoproduction of hydrogen, 88M/1738; CLAYFORM, FORTRAN 77 computer program apportioning constituents in chem. anal. into structl. formula, 88M/0060; comparison between mounting techniques as function of quantitative estimations by 88M/3269; constant potential titration method for studying Cu²⁺ desorption kinetics, 88M/0135; contemporaneous problems of science, technology, 88M/3374; dealumination of zeolites and, with SiCl4 or (NH₄)₂SiF₆, 88M/3744; electron microscopy, recent developments, 88M/1713; formation by hydrothermal action, mineralogical props., 88M/4980; goethite, hematite formation in presence of, at 25°C, 88M/5358; in soil, identification of, effect of sodium-pyrophosphate, 88M/4997; interaction of min. transformation with thermobaric condns. at depth, 88M/0179; Na hypochlorite as aid to extraction of, from black shales, 88M/5000; neoformation, transformation in diagenetic processes, characteristic features, 88M/5023; produced by weathering, props., 88M/5033; radiationrelated retrograde H isotope and K-Ar exchange in, 88M/3245; specific Cd sorption in relation to crystal chem. of, 88M/4995; volatile products of pyrolysis revealed by effect on calcite, 88M/3352; Africa, Calabar Flank of Niger Delta, burial diagenesis, case study, 88M/0177; Africa, Senegal Basin, Cretaceous shales, min. study, 88M/0178; S Atlantic, clay min. assocns., structl. evolution, Jurassic to Eocene, 88M/0221; Canada, Newfoundland, NE Grand Banks, clay min. indicators of geol., geochem. subaerial modification of near-surface Tertiary sediments, 88M/3416; China, Henan Province, in clay rocks, prelim. study, 88M/1720; Cyprus, used in manufacture of archaeological pottery, provenance, 88M/1745; NW Europe, diagenetic, K/Ar dating, evidence for Jurassic thermal anomaly, 88M/0010; Germany, Ruhr area, in waste dumps of
- strata, weathering of, coal-bearing 88M/1775; India, Kerala, Kundara clay mine, min. transformation in weathering crust, 88M/1766; India, off N. part of E. coast, distribn. in shelf sediments, 88M/3409; Israel, N. Galilee Basin, of fine-grained rocks, 88M/5025; Japan, Hamana Lake, in surface sediments, 88M/3414; Yokohama, Shimosueyoshi loam beds, sedimentary envt., 88M/1761; Kenya, and humus complexes in soils derived from volcanic ash, 88M/1763; Scotland, Inner Hebrides, Gt. Estuarine group, Jurassic, min. assemblages, post-depositional alteration, 88M/0163; USA, Mississippi River delta front, contrasting mudflow and distal shelf deposits, clay mineralogy, 88M/1767
- —, beidellite, problems in identification of, 88M/0141; synthetic, and hydroxy-Al solutions, bidimensional zeolitic structs. obtained from, prepn., characterization, 88M/0153; USA, Minnesota, high-charge, occurrence, 88M/1751
- ——, dickite, Bolivia, San Pablo mine, chem., phys. data, 88M/5012; China, Jiangxi Province, Songshugang, in new type of low T hydrothermal altered clay vein, 88M/3357; England, Yorkshire, occurrence in fireclays, 88M/3397; USSR, Karelia, Yatulia sediments, genesis, 88M/5020; Wales, Anglesey, occurrence, 88M/0109
- —, halloysite, electron spin resonance studies, 88M/3353; neoformation on volcanic glass in marine envt., 88M/0165
- —, illite, cements in sandstone, review, significance to hydrocarbon exploration, 88M/3396; chem., morphol. evidence for conversion of smectite to, 88M/0180; Fe substitution by ⁵⁷Fe Mössbauer spectroscopy, 88M/0147; hydrothermal treatment at 460°C, comparison of natural with hydrothermally formed clay mins., 88M/0453; *Turkey*, *Arçakoca*, crystallinity studies, Devonian sedimentary series, 88M/3407; *USA*, *Pennsylvania*, NH₄-bearing, in very low grade metamorphic rocks assoc. with coal, 88M/0183
- —, illite/smectite, interstratification, anal. of, 88M/3365; mixed-layer clay particles, fundamental nature, comment, 88M/1715, reply, 88M/1716; mixed-layer, evidence from ²⁹Si NMR for struct., 88M/3366; stability during diagenesis, exptl. study, 88M/1714
- —, illite-kaolinite-pyrophyllite, *Spain*, *Almadén*, in shales, arenites, 88M/5018
- —, imogolite, synthesis, reactions between silicic acid and Al ions in dilute aqueous solutions, 88M/4984; synthesis at 25°C, 88M/2076
- —, kaolinite, and chlorite in natural, artificial mixtures, methods of differentiation, 88M/3348; and micaceous clays, relationships between mean area, vol., thickness for dispersed particles of, application to surface area, ion exchange props., 88M/3350; determining rate constant of dehydroxylation, 88M/0128; dimethylsulphoxide and dimethylselenoxide intercalates with, NMR, IR, XRD study,

88M/0143; effect of saturating cation, pH, and Al, Fe oxide on flocculation of, 88M/0144; effect of volatiles from, on dissolution, DTA evidence, 88M/3351; electrokinetic stabilization using silicate mixtures, 88M/0157; flow behaviour of suspensions in the presence of organic additives, 88M/1729; high-T dehydration, effect of submicroscopic structl. parameters, 88M/0567; in coals, morphol., genesis, 88M/3349; in soil, crystallinity of, in relation to clay particle-size, soil age, 88M/5042; interaction with K salts of carboxylic acids, XRD, IR studies, 88M/4990; kaolinite-to-mullite reaction series, spinel phase formation during 980°C exothermic reaction in, 88M/3703; kinetics of dehydroxylation, 88M/3346; metakaolinite, measurement of disorder index, 88M/0137; orbital interactions perturbations of idealized two-dimensional, infinite silicate framework, 88M/5109; sedimentary and hydrothermal, compositional, structl. variations in size fractions of, 88M/1717; sedimentary, min. study, poss. use in industry, 88M/0156; separation by flushing process of fine iron sulphide particles from, 88M/1725; solubility, to 573 K, 88M/2077; standard, modelling dissolution behaviour in sea-water, 88M/3377; statistical inference, size distribus., peak broadening in finite crystals, 88M/3378; synthesis, 88M/4983; TEM contribn. to struct. of, 88M/0140; zeolitization of, to prepare detergent grade zeolite A zeolites, 88M/3392; Cameroon, in laterite, structl. characteristics of hematite, goethite, in laterite, TEM study, 88M/5032; Egypt, in apparant phosphatic sediments, 88M/0176; England, Cornwall, St. Austell, Greensplatt, reexamination of kinetics of thermal desorption of dimethyl sulphoxide and N-methyl formamide from, 88M/4974; Pakistan, Attock Dist., Kala Chitta Range, in bauxitic clays, 88M/1756; Poland, study on chlorination process, for Al industry, 88M/5006; Lower Silesia, Kalno, processing by high-gradient magnetic separation, 88M/5007; Poland, Zarów, 'Andrzej' deposit, refractory, influence of chem. parameters on classification, reserves of, 88M/5019: Sardinia, hydrothermal, sedimentary, chem., structl. order in, 88M/3347; Tanzania, kaolin deposit, mineralogy, genesis, 88M/3411; USA, Texas Gulf Coast, authigenesis, 88M/0187; USSR, Karelia, Yatulia sediments, 88M/5020

— , montmorillonite, Al³⁺ and Cr³⁺-exchanged, adsorption of 1,4-dioxan, tetrahydrofuran, tetrahydropyran from binary solution with methanol on, 88M/0118; Al³⁺, Cr³⁺, Fe³⁺-exchanged, vapour-phase sorption kinetics for alcohols on, 88M/1727; Al³⁺-, Cr³⁺-exchanged, vapor-phase sorption kinetics for solvents by, 88M/1728; Al-interlayered, transformations upon aging, 88M/0121; and quartz, gouge mixtures of, frictional dependence on velocity, compn., fabric, 88M/4353; Ca- and Mg-exchanged,

dehydration at elevated P, 88M/0138; Ca-, dynamics of $Mn(H_2O)_6^{2+}$ complexes in, in T interval typical for in situ recovery processes, 88M/1739; effect of electrolyte concn. on interaction of humic acid, humate with, 88M/3390; effect of saturating cation, pH, and Al, Fe oxide on flocculation of, 88M/0144; Fe substitution by 57Fe Mössbauer spectroscopy, 88M/0147; formation of highly orientated graphite from polyacrylonitrile by using 2D-space between montmorillonite · 88M/3395; formation of montmorillonitewater-soluble porphyrin complexes, thermal props., 88M/4979; from Ni deposits, solubility of, 88M/5183; H-, sedimentation vols., effect of condns. of prepn., 88M/3360; high-P differential thermal anal. (HP-DTA) of dehydroxylation of Na-rich montmorillonite and K-exchanged montmorillonite, 88M/3361; homoionic, sorption of ethylene glycol monoethyl ether (EGME) on, 88M/3387; homoionic, with thioamides, 88M/0150; montmorillonite-Cu-l-lysine complexes, optically selective adsorption of α-amino acids on, in high-P liquid chromatogr., 88M/1726; Na-, adsorption-desorption of sotalol hydrochloride by, 88M/0116; Na-, Cs, Sr diffusion through, at elevated T, 88M/4992; Na-, quinoline sorption on, contributions of protonated and neutral species, 88M/0133; Na-, settling, flocculation value of particles in aqueous media, 88M/5011; optical spectrum, site occupancy, oxidation state of Mn in, 88M/4977; oxaloacetic acid decarboxylation in presence of, 88M/3363; physicochem, study of interaction with hydralazine hydrochloride, cardiovascular 88M/3393; pillared, exchanged, acid-treated catalysts, synthetic organic chem. using, 88M/1732; problems in identification of, 88M/0141; sorptive of fluor-hydroxy-aluminium complexes of, 88M/1730; modelling dissolution behaviour in seawater, 88M/3377; statistical inference, size distribns., peak broadening in finite crystals, 88M/3378; structl. studies by Mössbauer spectroscopy, 88M/3364; trivalent cation-exchanged, acidity of, 88M/0117; Poland, Lower Silesia, Szklary, from weathering crust, Ni-bearing ferric analogue of, 88M/3362

 — , montmorillonite-humic acid mixtures, binding of Cd by, miscible-displacement expts., 88M/4998

—, nontronite, ferromagnetic or antiferromagnetic Fe III spin configurations in, 88M/5108; formations, of oceanic hydrothermal mounds, high U concentration in, 88M/0758; from Ni deposits, solubility of, 88M/5183; Mössbauer spectra, 88M/1807; reduced, intervalence electron transfer, magnetic exchange in, 88M/2075; struct., props., 88M/0111; Angola, mouth of Congo, elem. migration, min. genesis, 88M/2305; Czechoslovakia, Pukanec region, Sitno effusive complex, weathering product of andesite, 88M/1750

— , palygorskite, electron microprobe anal., 88M/1712; influence of chem. compn., textural characteristics of, on acid leachings of octahedral cations, 88M/0119; USSR, Mangyshlak Peninsula, from Cretaceous— Tertiary boundary, 88M/3413

 —, saponite, parameters influencing layers stacking types, review, 88M/1806

—, sepiolite, 25°C, 1 atm dissolution expts., 88M/3379; acidic, dehydration of ethanol catalysed by, 88M/3381; dehydration, phase transformation in, radial distribn. anal. study, 88M/3736; natural, catalytic activity in cyclohexene skeletal isomerization, 88M/0114; recent problems, 88M/1748; China, Jiangxi Province, Pingle depression, Permian, diagenetic transformation, relationship with coal metamorphism, 88M/0209; Spain, Madrid, Vicálvaro, from Tertiary beds, chem. anal., 88M/0166

-, smectite, authigenic trioctahedral,

controlling pH, alkalinity, silica, Mg concns. in alkaline lakes, 88M/2386; chem., morphol, evidence for conversion to illite, 88M/0180; cross-linked, synthesis, props., 88M/3359; dioctahedral, distribn. of Ca, Na ions in, 88M/4987; dioctahedral, structl. characteristics, 88M/3367; Fe in struct. of, Mössbauer spectra, 88M/0159; ferric, synthesis, crystallogenesis by evolution of Si-Fe coprecipitates in oxidizing condns., 88M/0113; first recorded occurrence in ordinary chondrite, 88M/0950; heated, Li-saturated, charge reduction, octahedral charge, Li retention in, 88M/3358; hydrothermal treatment at 460°C, comparison of natural with hydrothermally formed clay mins., 88M/0453; identification of Na-smectite hydration by 'humid cell' high voltage microscopy, 88M/1733; interaction of Fluazifop-butyl and Fluazifop (herbicides) with, 88M/3394; layer charge props., tetrahedral vs. octahedral. 88M/3370; low-Fe, oxidation of benzidine on, proposed mechanism, 88M/0132; microbial reduction of structl. iron(III) in, 88M/5001; pillaring processes with and without tetrahedral substitution, 88M/0120; smectite/mica, syntheses of interstratified mins., 88M/4981; smectite-sand mixtures, effect of exchangeable K on hydraulic conductivity of, 88M/0155; studies of membrane behaviour, electrokinetic, osmotic, isotopic fractionation processes at elevated P, 88M/4991; to illite reaction, exptl. investigation, dual reaction mechanisms, O-isotope systematics, 88M/5003; tri-octahedral, synthesis, 88M/4982; volkonskoite-chromian smectite nomenclature problem, reassessment, 88M/0110; Egypt, in apparant phosphatic sediments, 88M/0176; France, Haute-Provence, Vergons area, transformation, measurements of degree of diagenesis in sediments, 88M/6361; Pacific Ocean, TEM observation of smectite-palygorskite transition in deep marine sediments, 88M/1747; Poland, Lower Silesia, hydrothermal origin, in basalt, 88M/3400; Wielune region, epigenetic glauconitesmectite from Jurassic sediments,

88M/3404; USA, California, Point Sal ophiolite, compositional, structl. variations of phyllosilicates, 88M/6032

-, -, yakhontovite, new Cu-containing smectite, 88M/1097

- -, vermiculite, benzidine-vermiculite intercalate, structl. study by ⁵⁷Fe Mössbauer spectroscopy, 88M/0145; historical summary, 88M/1742; interaction of organophosphorus pesticides with, 88M/0151; lanthanide-, interlayer complexes with amides, 88M/3369; layer charge props., tetrahedral vs octahedral, 88M/3370; parameters influencing layer stacking types, review, 88M/1806; ²⁹Si MAS-NMR spectroscopy, observed, predicted distribu. of tetrahedral Al-Si, 88M/5114; unusually expandable low-charge, 88M/3368; uptake of lanthanides by, 88M/4988; Austria, Bohemian Massif, in serpentinite, mineralogy, genesis, 88M/0171; Poland, Lower Silesia, Zabkowice Ślaskie, mins. with intermediate struct. chloritevermiculite, origin, 88M/1740; South Africa, Transvaal, effects of Rb, Cs, Tl on interlayer K release from, 88M/1721; USA, Washington, Mt. St. Helens, trioctahedral, in 1980 pyroclastic flow, 88M/0184
- -, vermiculite-anilinium intercalate, crystal struct., 88M/0146
- sediments v. sediments, clay
- -, soil, Al-, Ca-saturated, low T dehydration kinetics of, 88M/3376; interpn. of alkylammonium characterization 88M/5002; E Canada, min., microtextural changes assoc. with lime stabilization of, 88M/1774
- quartz mineral phases, ²³⁸U decay series disequilibria in, 88M/5687
- -water system, phys. model, 88M/5004

Cleavelandite, v. feldspar

Clinochlore v. chlorite

Clinohumite v. humite Clinoptilolite v. zeolite

Clinopyroxene v. pyroxene

Clinopyroxenite, USSR, Urals, magmatic,

evolution, 88M/4479

- xenoliths, Africa, alkali, in highly potassic magmas, regional K-metasomatism in mantle beneath W. branch of E. African rift, 88M/2776; Norway, Oslo Rift, petrol., 88M/6150

Clinozoisite, v. epidote

Clintonite, struct., crystal chem., 88M/5112

Coal, and coal-bearing strata, recent advances, (book), 88M/1701; and coal-bearing strata, advances, future prospects, 88M/2403; biol. markers extractable from, 88M/2417; coaly organic matter in sediments of late diagenetic to low metamorphic stages, optical anisotropy, 88M/2992; Ga detn. in, by graphite furnace AAS using Ni matrix modification, 88M/1688; hydrogenation behaviour of coal maceral assocn., 88M/4647; interpn. of characteristics of seams from chem., phys., petrogr. studies of peat deposits, 88M/2405; maturity detn. of organic matter in, using methylphenanthrene distribn., 88M/0848; min. matter in, 88M/2407; morphol., genesis of kaolinite in, 88M/3349;

occurrence, geochem. significance of 1,2,5,6-tetramethylnaphthalene 88M/4153; petrol., use of automated image anal., 88M/1406; processes controlling compn. of acid sulphate solutions evolved from, 88M/3619; pyrite-, marcasite-bearing, spontaneous formation of hydrated iron sulphates on lab. samples of, 88M/2638; recent advances in organic petrol., geochem., 88M/2408; S in, 88M/2404; submicroscopic model of fly ash particles from combustion of, 88M/3620; XRF anal. of S, tr. elems. in, 88M/3316; Australia, Surat Basin, Walloon Coal Measures, oil-prone, 88M/2409; Bulgaria, Pirin deposit, REE in, 88M/0767; Canada, mining, deposits, review, 88M/1946; Alberta, Mt. Allan, Kootenay group, Jurassic-Cretaceous, rank-depth relationships, lithol., depositional setting, 88M/3000; major, minor, tr. elem, distribn. in, 88M/4045; Br. Columbia, Fording coal mine, elem. distribn. in coal seams, 88M/5737; Kootenay Group, Jurassic-Cretaceous, fresh and weathered, comparison of elem. distribn. in, 88M/2335; British Columbia, Zone A Hat Creek Deposit No. 1, lacustrine, concentration of elems. in, 88M/4151; Nova Scotia, Sydney coalfield, U content, distribn. in, 88M/4043; Ontario and British Columbia, two Cretaceous coal-bearing sequences, geochem., 88M/0783; England, Howick coal formation, elem. concentrations, relationship in, 88M/5697; Yorkshire coalfield, maceral concentrates from coal seams, characterization by pyrolysis anals., 88M/5889; India, study of tr. elems. in lithotypes of, 88M/4142; V in, 88M/5716; Arunachal Pradesh, Elephant Flat area, petrol., chem., depositional aspects, 88M/4658; Bihar, West Bokaro coalfield, relationship between maceral compn. and carbonization props. of coal seams, 88M/1426; Netherlands, Valkenburg ald Geul, borehole samples, petrogr., 88M/4644; New Zealand, F detn. by F ion-selective electrode method, 88M/5727; Mokau, chem. props., compn., 88M/0776; Waikato, chem. props., compn., 88M/5726; Poland, Upper Silesian coal basin, Cl content of, 88M/5702; USA, Kentucky, Springfield, Herrin, variation in pyrite size, form, microlithotype assocn., 88M/1441; Ohio, anals., 88M/5740; Pennsylvania, NH₄-bearing illite in very low grade metamorphic rocks assoc. with, 88M/0183; Wyoming, Hanna fm., resinite macerals from, fluorescence spectral anal., 88M/1440 -, anthracite, Korea, graphitization of, TEM,

SUBJECT INDEX

- XRD studies, 88M/4663
- bituminous, scientific classification, 88M/4627
- -, brown, inorganic components, content, compn., 88M/4006; Australia, Victoria, iron in, Mössbauer study, 88M/1432; Hungary, Nograd Basin, occurrence, transformation of phyllocladanes in, 88M/2427; Poland, low-T ashes of, min. compn., 88M/4652
- -, lignite, assocn. of major, minor, tr. inorganic elems. with, 88M/0788,

88M/0791; Israel, Hula Basin, freshwater, S diagenesis in, implication for S-C relationships in organic sediments, 88M/4136; USA, characterization by pyrolysis mass spectrometry, multivariate anal., 88M/0862; Texas, characterization of U in, 88M/5608; Jackson group, kaolinite, opal-CT, clinoptilolite in altered tuffs interbedded with, 88M/1442

-, sphagnum brown, poss. oil-generating precursor. geochem. characteristics. 88M/5910

-, vitrinite, with non-uniaxial negative reflectance characteristics, recognition of, 88M/6450; reflectance data, detn. of palaeoheat flux from, and from sterane, hopane isomer data, 88M/6451; Canada, Grand Banks S. Whale Basin, reflectance measurements, implications for hydrocarbon exploration, 88M/2999; Germany, Harz Mts., reflectance, geol. interpn., 88M/6329

Coalification, studies of peat as input to, polysaccharides in peats, 88M/5897; studies of peat as input to, sampling sites, prelim. fractionation, 88M/5898; studies, recent advances, application to geol., 88M/2406

Cobalt, influence of iron oxides on Co adsorption by soils, 88M/0136; USA, Wyoming, geol., occurrence of critical strategic metals, 88M/3563

— isotopes, ⁶⁰Co, in sea-water, radiochem. separation using continuous-flow coprecipitation-flotation, 88M/1692

-koritnigite, Germany, Black Forest, Wittichen, occurrence, 88M/3163

Cobaltaustinite, South Australia, Dome Rock, new arsenate min., 88M/6088

Cobaltite, natural, magnetic props., 88M/1536; Belgium, Namur province, Havelange, occurrence, anals., 88M/4322

Collagen, from fossil bone, variability in preservation of isotopic compn., 88M/5887

COLOMBIA, W., geometrical control of subduction-related magmatism, Mesozoic, Cainozoic plutonic history, 88M/0045; Amazonas, Araracuara, four soil profiles, major, minor elems. geochem., mineralogy, 88M/3437; Chivor and Muzo deposits, emeralds, min., spectral colorimetric studies, 88M/3772; Gorgona Is., noble metal abundances in komatiite suites, 88M/2272; Nevado del Ruiz, Arenas crater, visit, 1985, recommendations, 88M/4604; Somondoco, emeralds, chem. compn., fluid inclusions, origin, 88M/5491

Columbotantalite, France, Beauvoir granite, chem. data, 88M/4305

Combeite, revised data for, 88M/3458

Comendite, Mongolia, geochem., origin, 88M/2854

Comets v. planetary studies

Compounds, isotopic forms of, estimating Gibbs free energies of, 88M/5353

Computer programs, animation techniques, use in teaching of stereographic projection, 88M/0063; FORTRAN program for simulating major-, tr.-elem. variations during fractional crystallization, 88M/0058; IMAGE, FORTRAN V program for image anal. of particles, 88M/0059; NPSTAT:

FORTRAN-77 program to perform nonparametric variable-by-variable comparisons on two or more independent groups of data, 88M/0064

Conductivity meter, programmed digital ring heat source thermal, descripn., 88M/1553

Conglomerate, Au-U-quartz-pebble, genesis, of non-oxidizing existence 88M/3898; atmosphere, Precambrian France, Hautes-Alpes, Grès du Champsaur fm., andesite pebbles from, K/Ar dating, 88M/2970; India, Holenarasipur schist belt, and nature of pre-Holenarasipur crust of Peninsular India, 88M/6123; Ireland, County Mayo, Maumtrasna fm., Ordovician, nature, field relations, 88M/4636; Scotland, Midland Valley, Silurian, acidic volcanic clasts in, geochem., implications for Caledonian orogeny, 88M/4377; Scotland, N. central belts of Southern Uplands, provenance of granite boulders in, 88M/4881; South Africa, Dominion, late-Archaean, new aspects of derivation, relationship with Witwatersrand, 88M/3897 CONGO, Sembe-Ouesso basin,

CONGO, Sembe-Ouesso basin, nature significance of dolerite, 88M/2692

Continental crust v. Earth, crust, continental

— margin, active, deep fault model, geomechanics, 88M/6099

Cookeite, *China*, *Henan Province*, in clay rocks, prelim. study, 88M/1720

Copiapite, Czechoslovakia, Niná Myšľa, occurrence, anals., 88M/1056

Copper, adsorption on clay, Fe-Mn oxide, organic fractions along salinity gradient, 88M/2289: elimination of interferences in flameless AAS detn. of Cu in, 88M/3288; equilibrium speciation model for, in sea, estuarine waters, 88M/4072; field detn. in sulphide materials by flameless AAS, 88M/4181; in calcite, detection by visible and near-IR reflectance, 88M/1519; petrogr. criteria for establishing Cu potential in granitic plutons, 88M/5251; voltammetric study of adsorption of Cu(II) species on solid particles added to sea-water, 88M/2018; Mid-Atlantic Ridge, native, in supergene sulphides, 88M/5569; Baltic Sea, dissolved organic, small-scale variations of, 88M/5808; Indonesia, Aceh, Tangse, geol., 88M/0646; New Zealand, Manukau Harbour, in 88M/5333; Pacific, Cu, Au and subduction, trans-Pacific perspective, 88M/5231; Scotland, Argyllshire, Kilmelford, Cubearing intrusive suite, geol., 88M/3570; USA, Suwannee River, Cu binding by dissolved organic matter, fulvic acid equilibria, 88M/4161; Zimbabwe, Renco mine, controls on deposition, 88M/0373

 complexation, field comparison of two methods for detn. of, bacterial bioassay, fixed-potential amperometry, 88M/0925

— compounds, Cu oxides, metastable, formed in initial stage of Cu oxidation, Cu₄O-S₁, Cu₄O-S₂, electron microscopic study of struct., 88M/1823; Cu silicate, 'Egyptian blue', pigment used in Pompei frescoes, 88M/1586; Cu sulphide, Pt, Rh behaviour during crystallization under hydrothermal condns., 88M/5427 - deposits, Cu-Ag, Kupferschiefer, genesis by convective flow of Rotliegende brines Triassic rifting, 88M/0343; during Australia, Cobar, in deformed turbidites, structl. control, hydrothermal origin, 88M/0354; N Australia, Au-Zn-Pb, depositional models, 88M/5209; South Australia, Burra orebody, origin, age, 88M/0383; Olympic Dam, Cu-U-Au, geol., 88M/5178; Bulgaria, Chelopech, Cu pyrite petrochem. characteristics, 88M/3541; Canada, Montana, Daisy Creek, Cu-Ag, stratabound, hinsdalite and other oxidation products, 88M/0662; Ontario, Lake Huron, N. shore region, 88M/1894; Canadian Shield, Selbaie, Cu-Zn-Ag, geochem. alteration assoc. with, 88M/0874; Chile, manto type, review, 88M/1902; China, Longmenshan, geol. characteristics, factors, 88M/5256; ore-controlling Zhongtiao Mts., early Proterozoic. mineralization, evolution, 88M/0350; Central Europe, Cu-Ni, classification, examples, 88M/3537; France, Massif Central, Chessy, Cu-Zn, min. data, 88M/3579; Germany, Marsberg, geol., 88M/5249; Namibia, Matchless, deformed, metamorphosed massive sulphide deposits, 88M/0369; Norway, Tverrfjell, Cu-Zn, geol. setting, 88M/3567; Pakistan, Baluchistan, Cu-Mo. Dashte Kain. paragenetic, petrochem. study of K-silicate alteration, hypogene mineralization of, 88M/1865; Papua New Guinea, Panguna mine, Cu-Au, geol., resource estimation of, 88M/5263; Peru, Quiruvilca, Cu-Pb-Zn-Ag, geol., mineralization, alteration, 88M/5295; Poland, Cu-Ag, Kupferschiefer, origin, presentation of new genetic model, re-appraisal, 88M/3539; Fore-Sudetic, effect of boundary dolomite on formation, mineralization of white sandstone roof, 88M/3586; mineralization of sandstone in, 88M/3585; Poland, Lubin, anisotropy of, statistical study, 88M/0368; Scotland, Argyllshire, Kilmelford dist., lithogeochem. exploration for, 88M/4169; Minnesota, Duluth complex, Cu-Ni, meltcountry rock interaction, S, O studies, 88M/0661; Montana, Spar Lake, Cu-Ag, strata-bound, genesis, controls inherited from sedimentation and preore diagenesis, 88M/0387; Utah, Lisbon Valley, from saline basin brines, formation of carbonatesulphate veins assoc. with, fluid inclusion, isotopic evidence, 88M/0364 -, porphyry, plate-tectonics based

—, porphyry, plate-tectonics based distribn., occurrence model, 88M/5185; Brazil, Goias, Chapada, metamorphosed wall-rock, origin, geochem., 88M/0392; Canada, Br. Columbia, Maggie, vinciennite in, 88M/1054; Chile and Philippines, S isotope reconnaissance of, 88M/2191; China, Xiaosigou dist., Cu-Mo polymetallic deposits, formation condns., 88M/0351; Iran, Sar-Cheshmeh, Pb isotope data, 88M/3901; Philippines, W central Luzon Is., Dizon, gold-rich, geol., tectonic setting, 88M/5288; Sweden, Tallberg, prelim. report, 88M/3568; USA, Maine, Catheart Mt., white mica geochem., 88M/6029

— —, stratiform, hosted by low-energy sediments, aspects of metal transport, 88M/0625; Canada, Alberta, Siyeh fm., Proterozoic, prelim. observations, 88M/1897; Ireland, Gortdrum, genesis, mineralogy, geochem. of U in, 88M/3573; Poland, USA, midcontinent, comparison, 88M/0290

— mineralization, South Australia, Flinders Ranges, Patawarta diapir, 88M/5595; Stuart Shelf-Adelaide geosyncline, 88M/0355; Canada, Michigan, Upper Peninsula, Portage Lake volcanics, palaeomagnetism, age of, 88M/6460; Germany, Siegen, Brachbach, 88M/3160; Israel, in sedimentary cover assoc. with tectonic elems., volcanism, 88M/3548; Italy, Ortiglieto, Marciazza, Cu-pyrite, min. assocn., 88M/1882; Poland, Lubin mine, Whiteliegendes sandstones, variability of, 88M/3584

— —, porphyry, Finland, Halsua, Tienpää, Proterozoic, characteristics, 88M/1903; Pakistan, Baluchistan, Chagai calc-alkaline magmatic belt, comparison of hydrothermal alteration in, 88M/1864; USSR, El'kon horst, new type, 88M/0308

minerals, Canada, Dist. of Mackenzie, E.
 Arm area, Cu arsenide mins., occurrence,
 88M/2630; England, Yorkshire, Middleton
 Tyas, occurrence, 88M/1562; Wales,
 Dolgellau, occurrence, 88M/1566;
 Switzerland, Kanton St. Gallen,
 Weisstannental, in Lower Permian lapilliagglomerate tuff, 88M/1911

— orebodies, Australia, Queensland, Mt Isa, syntectonic, stratabound phyllosilicate zones assoc. with, 88M/5212; Japan, Iwate Pref., Kamaishi mine, Cu sulphide ores, compositional variation of pentlandites in, 88M/1047

 --- -sulphur-water system, Eh-pH diagrams for stable and metastable phases in, 88M/2043

Coquimbite, Switzerland, Valais, occurrence with zincocopiapite, 88M/2639

Coral, and simulants, anals., 88M/5510; annually-banded, detn. of Pb, Cd and other tr. metals in, 88M/5946

Cordierite, constraints on granulite genesis from C isotope compns. of, 88M/5746; detn. of coefficient of diffusion of water in, 88M/0552; Fe-Mg mixing in, constraints from natural data, implications for cordierite-garnet geothermometry in granulites, 88M/6008; Li,Na,Be-, crystal struct. refinement, thermal expansion between 100 and 550 K, 88M/3455; Mg-, structl. states, Landau theory, 88M/0248; Mg-, structl. states, order parameters from synchrotron X-ray and NMR data, 88M/0247; pure and doped, thermal expansion behaviour by time-of-flight neutron diffraction, 88M/4765; Canada, Quebec, Gaspé, McGerrigle thermal aureole, and biotite, chemographic relationships, 88M/4752; France, Brittany, Huelgoat intrusion, REE partitioning in. implications for cordierite-bearing granitic rocks, 88M/3925; Japan, Kyoto, Daimonji, in hornfels, origin of sector trilling in,

- 88M/2551; Spain, Central System, Avila batholith, in granitic rocks, origin of, 88M/2838
- diatreme, France, Massif Central, Fontmarcel, hydraulic brecciation, 88M/1237
- porphyroblasts, Australia, Cooma complex, sequential growth, microstructl. evidence of prograde reaction, 88M/6415
- —, sekaninaite, Sweden, W. Bergslagen, Gåsborn area, in hydrothermal vein, 88M/4257
- anthophyllite rocks, Australia, Queensland, metamorphosed magnesian pelites, 88M/3109
- – spinel-quartz assemblages, potential geobarometer, 88M/3028
- Corkite crystals, Germany, Rheinbreitbach, Gruhe 'Virneberg', occurrence, 88M/4810
- Cornubite, single crystals, min. descripn., crystal struct., 88M/1828
- Corrensite, Canada, Ontario, Sharbot Lake, alteration of phlogopite to, 88M/0182; Germany, Württemberg, Nagold, in Triassic Middle Muschelkalk, mineralogy of borehole samples, 88M/4648
- Corundum, calculation of elasticity, high *P* instabilities in, with potential induced breathing model, 88M/4769; morphol. of α-Al₂O₃, importance of surface relaxation, 88M/5136; solubility in HCl fluid, and forms taken by Al, 88M/5404; surface repaired, two unusual variations, 88M/3774; synthetic, inclusions in, 88M/5496; *Western Australia, Darling Range*, and maghemite, in laterites, 88M/3424; *Greece, Xanthi area, Rhodope zone*, in marbles, fluid phase compn., 88M/4724
- —, ruby, crystal struct., 88M/3778; in sword, descriptn., 88M/3771; Lechleitner synthetic, with natural seed, synthetic overgrowth, 88M/5494; synthetic, descriptn., 88M/2107; synthetic, grown by Knischka, morphol., inclusions, 88M/0574; synthetic, made by Lechleitner, props., 88M/0573
- —, sapphire, blue, colour dependent on Ti, Fe ions, 88M/2096; cause of colour in natural blue, 88M/2095; Chatham synthetic blue, morphol., twinning in, 88M/3776; crystal struct., 88M/3778; doublet made of natural green sapphire crown and Verneuil synthetic ruby pavilion, 88M/3775; yellow, identification, two important techniques, 88M/3777; yellow, seven types, stability of light, 88M/5495; Nigeria, Kaduna Province, blue, yellow, 88M/2094; blue, yellow, occurrence, 88M/0572
- Corsica v. France
- Cosalite, evolution of bismuthian, stibian mineralization in cassiterite-silicate-sulphide metallization, 88M/4313
- COSTA RICA, geochem. of metallic tr. elems. in fumarolic condensates, 88M/2281; geol., petrochem., metallogenic characteristics of gold belt, contribn. to new exploration, 88M/3565; Arenal Volcano, xenoliths in basaltic andesite flows, inference of lower crust compn., 88M/1367; Arenal—Chato volcanic system, structl., stratigraphic, petrol. aspects of, evolution of young

- stratovolcanic complex, 88M/6279; Nicoya ophiolite complex, high, low level plagiogranites, petrogenesis, 88M/4460; Osa Peninsula, Nicoya complex, Cretaceous—Tertiary ophiolite, geol., geochem., emplacement, 88M/6306; Poás volcano, geol. of summit region, spatial, temporal variations among recent lavas, 88M/2925; dynamic model for volcanic activity, 88M/1368
- Coticule (whetstone), *Belgium*, *Ardennes*, in schists, geol., tectonic, metamorphic features, 88M/4707
- Covellite, crystal struct. under high *P* up to 33 kbar, 88M/3498; heterogeneous, epitaxial nucleation of protein crystals on min. surfaces, 88M/6031; kinetics, mechanism of formation, 88M/0533
- Crandallite, Belgium, Namur province, Haut-le-Wastia, occurrence, anals., 88M/4334
- Cratons, Archaean, and diamond, platinum, evidence for coupled long-lived crustmantle systems, 88M/4352
- Cretaceous-Tertiary boundary, bolide impacts, acid rains, biospheric traumas, 88M/0964; global tr.-elem. biogeochem. at, ocean, biotic response to hypothetical meteorite impact, 88M/4239; magnetic props, of microspherules, poss. origin by combustion, 88M/6312; mass extinction event, argument for terrestrial causation, 88M/4858; rock magnetic signature of, 88M/4237; shocked quartz in clays, evidence for global distribn., 88M/0965; Sr isotopes in sea-water, and acid rain, 88M/4076; W Canada, relationship between Ir anomaly localities at three localities, 88M/4046; Denmark, Stevns Klint, Ir, S isotopes, REE in clay, 88M/4012; India, Deccan, flood basalts at, 88M/4574, 88M/4575; New Zealand, Flaxbourne River, new site, biostratigr., geochem., 88M/2539; Italy, Gubbio, Ir variation as constraint on duration, nature of events, 88M/5701; USA, Wyoming, new site, 88M/4238; USSR, Mangyshlak Peninsula, expandable palygorskite from, 88M/3413; Turkmen SSR, Sumbar-SM-4 section, Rh distribn. analysed by ultrasensitive laser photoionization, 88M/5709
- Crichtonite group, *Italy*, *Switzerland*, new findings, 88M/2617
- Cristobalite, α-, polarization effects in IR spectra, 88M/5123; high-T transformation of tridymite single crystals to, 88M/3743; in soils derived from volcanic ash, in temperate, tropical regions, origin, 88M/1752; transformation mechanisms of tridymite to, TEM study, 88M/5485; E. Pacific Rise, in andesite from 3400m depth, 88M/2909
- Cryolite, heat capacity measurements for, and reactions in system Na-Fe-Al-Si-O-F, 88M/3770; USA, Texas, Hudspeth County, Sierra Blanca Peaks, in rare metal-enriched rhyolite, 88M/3970
- Cryptomelane, and florencite, significance of lithiophorite interface between, 88M/1077

- Crystal aggregates, induced morphol., formation of, 88M/1989
- growth, morphologies obtained from growth from solution by forced convection, 88M/5361; numerical simulation of horizontal Bridgman growth, calculation of interface, 88M/0434
- structure, (3 + 1)-dimensional Patterson and methods for detn. of Fourier one-dimensionally modulated structs., 88M/0236; advantages of synchrotron radiation for polycrystalline diffractometry, 88M/5067; and cation sites of rock-forming mins., 88M/3328; application of coincidence site lattices for crystal struct. descriptn., 88M/0235; bond valence model of inorganic bonding, 88M/5077; ceramic phases, standard XRD powder patterns, 88M/3446; computer program for analysing interstratified structs. by Fourier transform methods, 88M/5068; computer simulation of Bragg and diffuse scattering intensities against T for structl. phase transition, 88M/3443; correct choice of superspace group for incommensurate phase transition, 88M/1787; dependence of distortion of tetrahedra in acid phosphate groups HnPO4 (n = 1-3) on H-bond length, 88M/0238; derivation of twin laws for (pseudo-) merohedry by coset decompn., 88M/1783; detn. of ionic radii from cation-anion distances in, discussion, 88M/1782; electron spectroscopic studies of perfect and defect metal oxide surfaces, 88M/0229; gas-solid molecular struct. differences, 88M/0230; icosahedral solids, new phase of matter, 88M/3442; inorganic, systematic descriptn., classification, 88M/3438; kinetic rate laws derived from order parameter theory, theoretical concepts, 88M/5065; leastsquares absolute-struct. refinement, case 88M/0237; low-symmetric study, coordination polyhedra—pseudosymmetry and idealization, 88M/0232; matrix approach to symmetry, 88M/1788; microabsorption of X-ray intensity in randomly packed powder specimens, 88M/1789; molecular struct., vibrational force constants, accurate detn. by computation, 88M/0227; Na₂SO₄(I), at 693 K, 88M/0277; new aspects of crystal chem. based on ionic-atomic radii, 88M/0231; new set of Pauling ionic radii, 88M/5074; polytypes, polytypism, quantitative modelling of defect processes in ionic crystals, 88M/0226; quasicrystals, crystallogr., 88M/3441; representing three dimensions, techniques, 88M/5064; shortest known polyhedral O-O distance in a silicate, 88M/3444; simple statistics for intensity data from twinned specimens, 88M/5069; symmetry of incommensurate phases, practical formulation, 88M/0234; structl. hierarchy in ${}^{VI}M_{\chi}IIIT_{\chi}\phi_{z}$ mins., 88M/1827; superspace-group descriptn. of short-period commensurately modulated crystals, 88M/0233; unified structl. classification of AB2 molecules, solids from

valence electron orbital radii, 88M/0228; XRD effects from randomly twinned f.c.c. crystals undergoing transformation to h.c.p. phase, 88M/5070; α -LiGaSiO₄, α -LiGaGeO₄, α -LiGaGeO₄, 88M/5091; 57 Fe Mössbauer study on compns. of series Fe $^{3+}$ TaO₄-Fe $^{2+}$ Ta₂O₆, 88M/5142

Crystalline rocks, saline water, gases in, (book), 88M/3344

- solutions, models of, 88M/3661

Crystallization, fractional, FORTRAN program for simulating major-, tr.-elem. variations during, 88M/0058

Crystallographic data for intermetallic phases, Pearson's handbook of, (book), 88M/3341

Crystallography, (book), 88M/4966; at wavelength of 3.5 Å, solution of phase problem, 88M/1786; essentials of, (book), 88M/1702; geometrical, MATOP, interactive FORTRAN 77 program for solving problems in. 88M/5075; international tables, space-group symmetry, (book), 88M/0098; matrix calculation of optical indicatrix parameters from central cross sections through index ellipsoid, 88M/0052; synchrotron X-ray, new opportunities, 88M/1780

Crystals, and melts, glasses, especially in hydrous systems, calorimetric studies, 88M/0478; giant, illstrated account, (book), 88M/0094; inorganic, theory, computation of optical rotatory power in, 88M/1509; single, errors in elastic constant measurements in, 88M/6434; variational stabilization of ionic charge densities in electron-gas theory of, applications to MgO, CaO, 88M/5132; megacrysts, mantlederived, primary sulphide melt inclusions in, 88M/2808

CUBA, forms taken by Ni in nickeliferous mins. in silicate-oxide ores, 88M/5083

Cubanite, isocubanite, new definition of cubic polymorph of, 88M/6063

Cumulates, troctolitic, pyroxene oikocrysts in, evidence for supercooled crystallization, postcumulus modification, 88M/6200; Greenland, Tugtutôq younger giant dyke complex, gabbroic, syenogabbroic, syenitic, 88M/1188; Scotland, Insch intrusion, middle zone, and assoc. gabbroic rocks, silicate mineralogy, 88M/6153

Cuproadamite v. adamite

Cuprocassiterite, USA, South Dakota, Etta mine, discredited as mushistonite, 88M/2622

Cuprostibite, USA, New Jersey, Franklin mine, occurrence, 88M/6067

Cuprotungstite, Australia, New South Wales, Crookwell, Cordillera mine, occurrence, 88M/6059

Cylindrite, mutual Pb²⁺/Sn²⁺ substitution in sulphosalts, 88M/1055

CYPRUS, clay material used in manufacture of archaeological pottery, provenance, 88M/1745; orebodies, application of ordination, clustering techniques to qualitative data set, 88M/1666; drillhole CY-4, gabbro, ultramafic rocks, structl., petrol. features, 88M/1382; Troodos ophiolite complex, characteristics, significance of secondary magnetite in

profile through dyke component, 88M/4295; accretion, tectonic 88M/6288; depth trends in magnetic props. in area of prolonged sea-water drawdown in uppermost Troodos-type oceanic crust, petrol., intrusive suite, 88M/1547; 88M/4615; metal-depleted root zones of ore-forming hydrothermal systems, 88M/2159; plagiogranite, U/Pb dating, sheeted dykes, 88M/3219; petrol., 88M/6287; supercritical two-phase separation of hydrothermal -fluids in, 88M/5635; Ayios Mamas, tholeiite-boninite sequence, petrogenesis, poss. evidence for splitting of volcanic arc, 88M/6286

Cyrilovite, *Italy*, struct., crystal chem., 88M/1837

CZECHOSLOVAKIA, deep-seated CO2, problem of origin, 88M/2382; Moldanubian granulites, source material, petrogenesis, 88M/2352; Banska Stiavnica deposit, Terezia vein, Au-Ag mineralization, 88M/3861; Bohemian Massif, mineralization and granitic 88M/0337; discovery of greisen related to molybdenite mineralization, 88M/1913; hydrochem, evolution of saline waters from crystalline rocks, 88M/3829: stratigr., Brunovistulicum, 88M/4380; Osečná complex, perovskite from melilite rocks, 88M/4292; Svojsín volcanic strip, Proterozoic rocks, geochem., 88M/5534; Bohemian pluton, porphyries, origin by magma mixing, 88M/6176; Central S Carpathians, Getic Nappe, metamorphic evolution of low P 88M/4723; W Carpathian crystalline complex, isochron reassessment of K/Ar dating, 88M/1618; Čierna hora Mts., granitic rocks, petrol., 88M/3938; Hodruša-Štiavnica intrusive complex. assocn. of accessory mins., 88M/2840; biotite from granodiorite, significance for ore-content evaluation, 88M/2580; Horní Kalná, V- and Cu-bearing dolomite nodules from Permian sediments, 88M/2587; Malé Karpaty Mts. metamorphic zones, alkali and alkaline earth metals in crystalline schists, 88M/2353; Mlynsky Brook section, Malá Fatra Mts. crystalline schists, P-T condns. of metamorphism, 88M/3092; Nízke Tatry Mts. crystalline complex, simple model of paragneiss and amphibole rock protoliths, 88M/6405; Niná Myšľa, hypergene mineralization, 88M/1056; Kolársky vrch deposit, gold distribn. in sulphide and non-ore mins., 88M/3860; Pukanec region, Sitno effusive complex, nontronite, weathering product of andesite. 88M/1750; Rochovce, borehole KV-3, metagabbro, and Slovenské Rudohorie Mts., Hladomorna Valley fm., amphibolites, comparative min.-petrogr. characteristics, 88M/6403; Ševětín astrobleme, geol., 88M/5995; Central Slovakia, neovolcanic mountains, geochem. drainage survey, 88M/4171; Slovenske Rudohorie Mts., Rochovce granites, geothermometry, change in min. equilibria during recrystallization of garnet-mica-schist in cordierite hornfels from aureole, 88M/1454; Spišsko-gemerské rudohorie Mts., skarn mineralization, 88M/0344; Stráocvskych mt., high T autometasomatism in aluminous granites, 88M/1453; Suchý crystalline complex, metamorphic zones, 88M/1453; Suchý and Malá Magura Mts., retrograde processes in paragneisses, 88M/6404

Dachiardite, v. zeolite

Dacite, with self-reversed TRM, composite titanomagnetite-ferrian ilmenite grains and correlative magnetic components in, 88M/3128; Hungary, Tokaj Mts., pyroxene, petrogenesis, 88M/1305; Japanese island arc, xenoliths in, 88M/2755; USA, Washington, Mt. St. Helens, 1980-1986, crystallization of, quantitative textl. approach, 88M/6274; USSR, S Koryakia, Komandorsky basin, Cainozoic, origin of, geochem., exptl. data, 88M/0458; S Urals, magnesian, of basalt-rhyolite formation, 88M/2903

— porphyry, Canada, North West Territories, Dist. of Keewatin, Amer Lake map area, U/Pb dating, 88M/1652

Danalite, named after James Dwight Dana (1813–1895), biogr., 88M/4842

Danburite, elastic constants, 88M/1512; OH groups in nominally anhydrous framework structs.: IR study, 88M/0261; unusual thermal expansion of B–O bond in struct. of, 88M/3457

-- bearing mineralizations, *Italy, Maritime Alps, Briançonnais*, in Permian metapelites, 88M/0986

Danielsite, poss. unit cell for, 88M/6065; Western Australia, new sulphide min., 88M/1087

Davanite, K₂TiSi₆O₁₅, USA, Montana, Smoky Butte, in lamproites, X-ray powder data, 88M/2575

Davidite, *Italy, Switzerland, REE*-free, new findings, 88M/2617; *Yugoslavia, Alinici*, in hydrothermal veins, 88M/6077

 – loveringite, Norway, Finnmark, in early Proterozoic albite felsite, 88M/6055

Dawsonite, NaAl(CO₃)(OH)₂, USSR, Khibin alkaline massif, first occurrence, crystalline struct., 88M/1067

DEAD SEA, Ba, Ra in, 88M/5815; changes in thermo-haline struct., 1979–1984, 88M/2387; dolomitization, sulphate reduction in mixing zone between brine and meteoric water in exposed shores, 88M/0768; ²²⁸Ra in, 88M/5816; *Dead Sea Rift*, mineralization related to rift systems, 88M/1886

Deerite, in highly oxidizing conditions, reply, 88M/0997; O fugacity of, alternative view, 88M/0996; *Papua New Guinea*, occurrence, 88M/0995

Defernite, crystal struct., 88M/1833

Dendrochronology v. age determination

DENMARK, early diagenesis in coastal sediments, microbial activity, Mn-Fe-S geochem., 88M/0763; Bunter Sandstone fm., Triassic, diagenesis, 88M/2959; Danish subbasin, Gassum fm., Rhaetian-Lower Jurassic, diagenesis, 88M/6317; Mors dome, geochem. study of K-Mg-chloride

mineralization of Zechstein 2 salt, microthermometry on solid inclusions in quartz crystals, 88M/5695; Ribe County, improved graphical computer technique applied to mapping of geol. and groundwater chem., 88M/2372; Stevns Klint, Cretaceous-Tertiary boundary clay, Ir, S isotopes, REE in, 88M/4012

Desautelsite, named after P. E. Desautels, short biogr., 88M/6482

Descloizite, Cu-, China, Liaoning Province, Jianping County, new discovery, 88M/4304 Desert environments, exploration 88M/2501

pavements, influence of æolian and pedogenic processes on origin, evolution of,

88M/1447 Devilline, England, N. Pennine Orefield,

occurrence, 88M/1559 Diabase, Canada, Lake Nipigon, Middle Proterozoic, petrol., 88M/1286

dykes, precise U/Pb ages of, using tr. amounts of baddeleyite, zircon, 88M/4912; Canada, magnetic expression of, and downward modelling, 88M/6207

intrusions, Canada, Ontario, Nipissing, petrogr., palaeomagnetic characteristics, 88M/3137

sills, South Africa, Transvaal sequence, Penge iron fm., metamorphic evidence of early post-Bushveld sills, 88M/3085

Diagenesis, deep-burial, implications for vertical movements of crust, uplift of lithosphere, isostatic unroofing, 88M/1439; siliceous, fluid inclusions assoc. with, new data, 88M/1166; Israel, Mishash fm., Cretaceous, multi-phase O isotopic anal. as tracer of, 88M/3987; USA, Wyoming, Green River basin, carbonate, in nonmarine rocks, O isotope model for interpn. of, 88M/0787

Diamictite, Antarctica, Nimrod Glacier area, poss. Proterozoic glaciation on seventh continent, 88M/6345

Diamond, 'bort' quality, descriptn., 88M/2109; background to grading, 88M/2093; coated, unusual form, 88M/2090; De Beers gemquality synthetic, gemmological props., 88M/5488; exhibiting Mohs-Rose twin morphol., gem notes, 88M/5520; faceted yellow, descriptn., 88M/2107; in sword, descriptn., 88M/3771; inclusions in, 88M/2766; interstellar, and SiC, carriers of exotic noble gases in meteorites, 88M/5962; interstellar, from carbonaceous chondrites, nature, origin of, 88M/5964; meteorites from heptadecane, exptl. study, 88M/0962; multiple growth events during genesis, 88M/3852; natural, X-ray studies of growth of, 88M/5129; recent phys., chem., isotopic research of, 88M/2765; separation of natural from synthetic, using Barkhausen effect, 88M/2092; synthetic, evaluation of heat stability by mass spectrometer QMG 311, 88M/0521; synthetic, of mixed crystal habit, fractionation of N isotopes in, 88M/3851; synthetic, use of Barkhausen effect to identify, 88M/5489; three notable fancycolour, 88M/2091; use of microcomputers in selecting terminology for indexing gemmological literature, 88M/5490; vapour deposition, phys. props., 88M/0439; vapour

growth, noble-gas enrichment in, origin of, in ureilites, 88M/0953; with inclusions of euhedral green pyroxene crystals, 88M/0587: Xe-HL-enriched grains, formation in stellar envts., 88M/5965; N. American Cordillera, exploration geochem., 88M/2494; Botswana, Orapa kimberlite pipe, He isotopic variability within, 88M/5560: South Africa, alluvial, accumulation of, 88M/6335; South Africa, Roberts Victor kimberlite, C isotopic compn., N content, inclusion compn., evidence for 13C depletion in mantle, 88M/0612; Spain, poss. occurrence of, bibliogr., 88M/6473; Zaïre, alluvial, cosmogenic ¹⁰Be in, implications for ³He contents, 88M/0613; cubic, solar-type Ne in, 88M/3850; USA, Arkansas, bibliochrony of igneous rocks, emphasis on, 88M/4432

- crystals, semihydrothermal growth process in metallic alloy, 88M/2030

Diaspore, faceted, gemstone, 88M/0587; Pakistan, Attock Dist., Kala Chitta Range, in bauxitic clays, 88M/1756

Diatomite, Finland, Lake Soijärvi basin, chem. compn., porosity, melting T, 88M/1929; USA, Wyoming, 88M/1930

Diatremes, ultramafic, USA, Colorado Plateau, genesis of carbonate in pyrope from, 88M/6219

Dickite v. clay minerals

Digenite, use to determine S fugacity in hydrothermal expts., 88M/3682

Dimethylsulphide, hydroxide decompn. of dimethylsulphoniopropionate to 88M/4077

Diopside v. pyroxene

Diorite, France, Massif Central, Ardèche, intrusion into granite, 88M/6163; Ardèche, Velay, intrusion into granite, resulting microtextures, 88M/2834; Massif Central, Piolard, and Saint Julien-la-Vêtre interaction monzogranite, 88M/6164, field evidence for successive mixing between, 88M/6162; S. Portuguese Zone, relations to vulcanites, min. deposits of Iberian Pyrite Belt, 88M/4456

Dissolution kinetics of minerals, development of measuring instruments used in solution expts., 88M/3657; historical 88M/3656; influence of inorganic, organic additives on velocity of dissolution, 88M/3658

Dolerite, Australia, Kalgoorlie Au deposit, Golden Mile, host rock and fluid control on carbonate assemblages, 88M/0647; Congo, Sembe-Ouesso basin, nature, significance of, 88M/2692; Japan, Yamagata Pref., Sumiyoshizaki, alkali, petrol., 88M/4508; Liberia, Mesozoic, asthenospheric, lithospheric sources for, tr. elem., isotopic evidence, 88M/3944; Portugal, Lisbon area, geochem., transformations in spheroidal weathering, 88M/0800; Spain, Pyrenees, tholeitic, new data, 88M/1239; USSR, Podkamennaya Tunguska R., Kuz'movka, trap-assocn., geochem. struct., 88M/2237

dykes, Norway, Rogaland/Vest Agder, Precambrian, tholeiitic compn., major elem. chem., 88M/1228

-- sills, Scotland, Fife, alkali, emplacement of, relative to volcanism and sedimentary basins in Carboniferous, 88M/2826; Fife, Cardenden, olivine-, high-level emplacement into Namurian sediments, 88M/2827

Dolomite, and quartz, H2O, exptl. equilibrium data for reactions between, at total gas P of 5000 bars, 88M/3700; Ca-poor, Kuwait, from sabkhas, 88M/4327; Cainozoic. constraints, interpn. of 87 Sr/86 Sr ratios in. 88M/5743; chem. diagenesis thin-sections, ion microprobe as tr. elem. tool, 88M/5947; constitutional states, role of OH_n -groups in, at T up to $500^{\circ}C$, 88M/3767; decorating natural faces of mins. with anthraquinone, 88M/1510; dolomite problem, recent studies, 88M/4624; of formation, enthalpy 88M/0540; metamorphic, T influence on radiation damage line in ESR spectra, potential palaeothermometer, 88M/6073; minor-elem. distribus, in, electron channelling expts., 88M/1025; pedogenic, in calcic horizons, quantification, compositional characterization, 88M/2644; possibility of production by groundwater in sedimentation basins, geochem. anal., 88M/5686; saddle, as by-product of chem, compaction and thermochem, sulphate reduction, 88M/4329; Australia, Victoria, modern deposition in continental, saline lakes, 88M/6341; Belgium, Massif de la Vesdre, Membach, stratig., sedimentol., geochem., 88M/4014; Czechoslovakia, Horní Kalná, V- and Cu-bearing, from Permian sediments, 88M/2587; Namibia, Damara orogen, metamorphosed siliceous, reverse age relations of talc, tremolite, deduced from reaction textures in, 88M/6410; North Sea, Ettrick oil field, Zechstein, complex diagenesis in, 88M/6314; Pacific Ocean, New Caledonia, Maré atoll, asymmetric reef construction, 88M/6346; Poland, Lubin, boundary, in Zechstein, occurrence, petrogr., genesis, 88M/4649; Oldrzychowice deposit, petrographic variability, 88M/1942; Spain, Cantabria, Caborredondo, formation of, 88M/6325; United Arab Emirates, Abu Dhabi, Shuaiba fm., baroque, Cretaceous, petrog., stable isotope compn., 88M/4032

Dolomitic rocks, France, W. Pyrenees, Callovo-Oxfordian diagenetic series, evolution of, 88M/6392; USA, Florida, Floridan aquifer, from coastal mixing zone, characterization, 88M/4672

Dolomitization, kinetics of, 88M/3765; models, calculation of mass transfer coefficients for, 88M/5795; W. Canada, Devonian, fluid inclusion, evidence, 88M/5543; W Indies, Barbados, late Pleistocene mixing zone, 88M/6356; USA, Wyoming, Utah, Madison group overthrust belt, 88M/0789

Dolostone, Belgium, Verviers and Namur synclinoria, Devonian, petrogr., geochem., 88M/4640; Scotland, Fife and West Lothian, Dinantian non-marine, lithofacies, stratigr., Inner Hebrides, 88M/1412; from low-salinity-Jurassic diagenetic, lagoon, geochem., 88M/5696

Domeykite, USA, New Jersey, Franklin mine, occurrence, 88M/6067

DOMINICAN REPUBLIC, SW, isotopic, hydrogeol. study, 88M/5865

Donbassite, France, Massif Central, Li-bearing, occurrence, anals., 88M/3356; Echassières, Li-bearing, occurrence, 88M/5016

DSDP, Costa Rica Rift, Hole 504B, isotope geochem. of altered, weathered rocks, 88M/3786; Leg 38, Norwegian-Greenland Sea, interstitial waters, sediments, chem., 88M/2295; Leg 73, Holes 519A, 520, 522B, 524, basalt, geochem., 88M/0693; Leg 73, S. Atlantic, basalt, petrogr., min. chem., 88M/1377; Leg 73, S. Atlantic, basalts, ore mineralogy, 88M/1032; Leg 82, evolution of gabbro, influence of fluid phase on metamorphic crystallizations, 88M/1401; Leg 89, geochem. of primary, secondary phases in intraplate basalts, volcaniclastic sediments, 88M/2952; Leg 89, oceanic intraplate sheet-flow basalts, petrol., geochem., 88M/2250; Leg 89, Nauru Basin igneous complex, petrol., geochem., largevolume, off-ridge eruptions of MORB-like basalt during Cretaceous, 88M/2953; Leg 91, basalts and sediments, palaeomagnetic studies, 88M/3141; Leg 91, Pacific Ocean, Mesozoic basalt, geochem., 88M/2249; Leg 92, E. Pacific Rise transect, metalliferous sediments, 88M/2325; Leg 95, Site 612, ocean sediments, Mössbauer study, 88M/2323; Legs 61, 89, Nauru basin, basalts, flood implications for origin, 88M/2251; Site 445, Pacific Ocean, Diato Ridge, isotopic aspects of thermal, burial diagenesis of sandstone, 88M/0780; Site 590B, numerical models for diagenesis and Neogene Sr isotopic evolution of sea-water, 88M/0814; Sites 573, 574, central equatorial Pacific, Eocene-Oligocene metalliferous sediments, geochem., origin, 88M/0778

Duftite, England, Northern Pennine orefield, occurrence, 88M/4805

Dumortierite, Japan, Abukuma metamorphic terrain, in argillaceous gneisses, 88M/4250; South Africa, Namaqua mobile belt, Keimoes area, Ti-, occurrence, min. data, 88M/2555

Dunite, orientation of olivine in, from elastic wave velocity measurements, 88M/4761

Dust, red, *Ireland*, November, 1979 fall, SEM study, 88M/4637

Dyes, organic, growth mechanism, structl. relationships between crystal and impurities, 88M/5435

Dyke swarms, Precambrian mafic, Rb-Sr, K-Ar, Sm-Nd dating, 88M/4864; Proterozoic, geochem., petrogenesis, 88M/6154; Australia, N. Queensland, major NW dyke swarm zone, 88M/6203; Canada, Mackenzie, geochem., 88M/6213; Canary Islands, implications for formation of oceanic islands by extensional fissural volcanism, 88M/6290; Ireland, Sligo and Mayo, Cill Ala, phys. parameters, 88M/2830; Paraguay, basic, assoc. with Mesozoic rifting, 88M/6226; Tanzania, interpreted from aeromagnetic

88M/6181; Scotland, Inner Hebrides, Ross of Mull, Caledonian, spatial, temporal intimacy between lamprophyric, granitic magmatism around pluton, 88M/4466; USA, Appalachian Blue Ridge, Bakersville, Proterozoic basaltic magmatism, geochronol., petrogenesis, 88M/1289; USA, Minnesota and Canada, Ontario, Kenora-Kabetogama, Proterozoic, characteristics, 88M/3968

Dykes, dynamics of magma withdrawal from density stratified dyke, exptl. study, 88M/4465; Australia, detected by airborne magnetic surveys, 88M/6198; Austria, Innsbruck, mineralogy, chem. compn., petrogenesis, 88M/5629; Canada, Superior Province, Great Abitibi Dyke, petrol., 88M/6212; Cyprus, Troodos ophiolite, sheeted, petrol., 88M/6287; Egypt, North Eastern Desert, late Precambrian, geochem., geochronol., petrogensis, 88M/6179; France, Hercynian massifs, chem, compn., comparison with other plutonic rocks, 88M/0704; Greenland, Igaliko syenite complex, petrol., 88M/2813; Scotland, Scourie dykes, mineralogy, petrogenesis, geochem., crystallization processes in dykes intruded at depth, 88M/3053; v. also basalt, basic, diabase, dolerite, granitic, lamprophyre, metadiabase, ultrabasic dykes

Earth, and Mars, comparative anal. of volcanic impact on climates of, 88M/4195; ¹⁰Be, ¹⁴C in Earth System, 88M/5523; estimates of palaeodiameters through geol. times, 88M/6493; formation of 'magma ocean' on terrestrial planets due to blanketing effect of impact-induced atmosphere, 88M/4192; N. hemisphere ice, snow cover, measurements of, 88M/4197; origin of life on, impact frustration of, 88M/4847; secular cooling of, as source of intraplate stress, 88M/1550

- —, asthenosphere, France, Massif Central, peridotite xenoliths in basalts, textural, geophys. evidence for asthenospheric diapirism, 88M/2770
- —, atmosphere, effectiveness of ocean's biol. pump in global CO₂ scenarios, 88M/4078

-, biosphere, Archaean, 88M/2119

—, core, magnetohydrodynamics, 88M/6454; origin of main magnetic field, dynamics, 88M/6456, kinematics, 88M/6455

-, crust, constraints on melting and magma production in, 88M/3650; deep-burial diagenesis, implications for vertical movements of, uplift of lithosphere, isostatic unroofing, 88M/1439; fluid inventory of, influences on crustal dynamics, 88M/3816; geochem. evolution, 88M/3787; metamorphism of crustal rocks under mantle P, exptl. studies, 88M/2028; problems of struct., evolution of transition between continents, 88M/1403; variation of depth brittle-ductile transition due to cooling of midcrustal intrusion, 88M/6464; Baltic Shield, 2200 m.y. of crustal evolution, 88M/2677; Greece, Chalkidiki, 3-D crustal, upper mantle struct. beneath, 88M/6463; Japanese island arcs, petrol. model of mantle wedge and lower crust, 88M/1214; USA, Wyoming, Beartooth Mts., Archaean igneous rocks, Pb, Sr, Nd isotopic compns., implications for crust-mantle evolution, 88M/3974

-, continental, Archaean gold, relation to granulite formation and redox zoning in, 88M/5563; Archaean, chem. compn., 88M/1114; fit of continents in late Precambrian, 88M/1588; granitic rocks and 88M/4441; development of, late Archaean/early Proterozoic CO2 streaming through, geochem. segregation, 88M/4692; metamorphism and crustal rheology, implications for structl, development of, during prograde metamorphism, 88M/1111; simple model of open geochem. circulation in, 88M/0598; subducted to 100 km depth, implications for magma and fluid genesis in collision zones, 88M/1213; under NW Pacific, 88M/3175; southern Africa, evolution, 88M/0591; Canadian Shield, heat production in Archaean crustal profile, implications for heat flow, mobilization of heat-producing elems., 88M/4774; France, Massif Central, mantle-derived volatiles in, 88M/5529; W France, crust formation seen through Sr, Nd isotope systematics of S-type granites in Hercynian belt, 88M/5627; Greece, Macedonia, Guevgueli igneous complex, study of interactions between basaltic magmas and, 88M/2223; Guyana and USA, Montana, crustal evolution, Archaean-Proterozoic transition, evidence from geochem. of metasedimentary rocks, comment, 88M/5761, comment, 88M/5762, reply, 88M/5763; Sevchelles Islands, micro-continent on basis of seismic struct., rock types, 88M/2232; South Africa and Canada, investigations, interpns. of vertical distribn. of U, Th, K, 88M/3843; USA, Wyoming, Wind River Range, Medina Mountain area, Archaean, development of, 88M/4759

-, -, lower, B abundance, localization in granulites and, 88M/2358; deformation mechanisms in high-T quartz-feldspar mylonite, evidence for superplastic flow in, 88M/3029; eclogite facies metamorphism in, 88M/1116; fluid inclusions in rocks from, 88M/1113; high-grade metamorphic rocks, geochronol., related isotope geochem., 88M/1117; ion microprobe dating, 88M/4904; petrol. model derived from seismic velocities, radioactive heat production, 88M/3148; petrol., geochem., 88M/1112; phys., geochem. props., review, (book), 88M/0103; southern Africa, xenoliths, implications for, 88M/1126; E. Australia, xenolith evidence, 88M/1127; Germany, Eifel, granulite-facies lower crustal xenoliths, geochem., implications for geol. history of, 88M/1123; Greenland, late Archaean, evolution of, 88M/1119

—, —, upper, central Tibet, nature of, 88M/3147

——, lower, compn. of, nature of continental Moho, xenolith evidence, 88M/2761; geophys., petrol., workshop, 88M/6098;

impact-generated faults, theoretical calculations, 88M/4790; in areas of young volcanism, constitution, evolution of, 88M/4562; Antarctica, lateral isotopic discontinuity, 88M/2121; Australia, Arunta Block, upthrusted Proterozoic basic-granulite-anorthosite suite, anatectic gneisses, nature of, 88M/1496; Queensland, McBride Province, fluid activity in, min. evidence of amphibole, scapolite origin in xenoliths, 88M/1282

- -, oceanic, B isotope exchange between sea-water and, 88M/0821; genesis of refractory melts in formation of, 88M/1374; U in, 88M/0692; southern Africa. Proterozoic, and evolution of subcontinental mantle, 88M/5533; Cyprus, Troodos ophiolite complex, depth trends in magnetic props. in area of prolonged sea-water drawdown, 88M/1547; Iceland, hydrothermal alteration, remelting metasomatism, 88M/3801; West Indies, Haiti, Dummisseau fm., basalts, geochem., implications for origin of Caribbean Sea crust, 88M/5677
- —, –mantle boundary, magnetic character of, magnetic props. of mantle xenoliths and, 88M/2771
- —, mantle systems, coupled long-lived, Archaean cratons, diamond, platinum, evidence for, 88M/4352
- -, lithosphere, accessory mins. as indicators of evolution, 88M/2691; fluids in, experimentally-determined wetting characteristics of CO₂-H₂O fluids, implications for fluid transport, host-rock phys. props., fluid inclusion formation, 88M/3674; granites and thermal structs. in, 88M/4349; metasomatic, enrichment processes in peridotites, effect of asthenosphere-lithosphere interaction. 88M/3016; of continents, oceans, types of, initial parameters, ocean bed, 88M/4609; role of tectonic grain size reduction in rheol. stratification of, 88M/6465; spread of subducted lithospheric material along 88M/5368; mid-mantle boundary. subducted, chem. characteristics of fluid phase released from, origin of arc magma, exptl. evidence, 88M/1375; southern Africa, Kaapvaal, compn., struct., 88M/1208; Italy, Sardinia, nature of, mantle and deep crustal inclusions in mafic alkaline lavas, 88M/2836; NW Scotland, syn-orogenic alkaline magmatism, relationship to, 88M/4879; USA, Colorado-Wyoming, kimberlite-transported nodules, enrichment of lithosphere, 88M/4418; Great Plains foreland basin, buoyant sub-surface loading of, 88M/1558
- —, —, continental, metasomatism of, simulation of isotope, elem. abundance behaviour, case studies, 88M/3790; Tanzania, Nd, Sr systematics in eclogite xenolith, evidence for frozen min. equilibria in, 88M/4892
- —, -asthenosphere boundary, beneath southern Africa, high-, low-T garnet peridotite xenoliths, poss. relation to, 88M/2760

- —, magnetic field, model to explain, 88M/3132; origin of, (book), 88M/4963; Canada, Vancouver Is., secular variation of, from 18-5 to 15-0 k.y. BP, recorded in stalagmite, 88M/3139
- —, mantle, β-Mg₂SiO₄, poss. potential host for water in, 88M/3448; chaotic axisymmetrical spherical convection, large-scale mantle circulation, 88M/4775; compositional heterogeneities in high-T lherzolite, implications for mantle processes. 88M/2769; cryptology, 88M/3972; dense polymorph of Ca₃(PO₄)₂, host to accommodate large lithophile elems. in, 88M/5160; dependence of creep in olivine on homologous T, implications for flow in, 88M/4760; disordering effects in mantle mins., ferromagnesian spinel, 88M/3718; eclogite in, exptl. data, 88M/2669; fluid phases and redox state of, extrapolations based on exptl., phase-theoretical, petrol. 88M/3641; fluid transport. metasomatic storage in, 88M/3789; flume formation in D-layer, roughness of core-mantle boundary, 88M/1373; geochem. evolution, 88M/3787; interaction between small- and large-scale convection and postglacial rebound flow in power-law mantle, 88M/1557; lower, partitioning of Fe within high-P evidence for unusual geochem. in, lower, measurement of reduced peridotite-C-O-H solidus, implications for redox melting of, 88M/5400; melting expt. on model chondritic mantle compn. at 25 GPa, 88M/3648; phase relationships in MgO-SiO₂-H₂O system and mantle ultrabasite petrol., 88M/3645; redox models, review, new data, 88M/4414; suboceanic, concentration, behaviour, storage of H2O in, implications for metasomatism, 88M/3916; subsolidus P-T diagrams for nearly stoichiometric multicomponent systems and petrol. of, 88M/3647; E Africa, Nd, Sr isotopic compns. of carbonatites, implications for mantle heterogeneity, 88M/0719; E Australia, volatile-rich, 88M/2777; SE Australia, lithospheric, isotopic, geochem, constraints on growth, evolution, 88M/3953; Greece, Chalkidiki, 3-D crustal, upper mantle struct. beneath, 88M/6463; Indonesia, Sunda arc, volcanic rocks, geochem., isotopic systematics, implications for mantle sources, mantle mixing processes, 88M/2246; Japanese island arcs, petrol. model of mantle wedge and lower crust, 88M/1214; USA, Arizona, Geronimo volcanic field, xenolith-bearing alkalic basalts, petrol., geochem., evidence for polybaric fractionation, implications for mantle heterogeneity, 88M/4437; Wyoming, Beartooth mts., Archaean igneous rocks, Pb, Sr. Nd isotopic compns., implications for crust-mantle evolution, 88M/3974
- —, —, metasomatism v. metasomatism, mantle
- —, —, upper, anomalous, beneath Australian— Antarctic discordance, 88M/3176; evidence for liquid immiscibility in, 88M/1227; geophys., petrol., workshop, 88M/6098; magnetite activities across MgAl₂O₄–Fe₃O₄

spinel join, application to thermobarometric estimates of O fugacity, 88M/5417; majorite partition behaviour, petrogenesis of, 88M/3644; metasomatism, 88M/2788; Na-rich metasomatism in, implications of expts. on pyrolite-Na2O-rich fluid system at 950°C, 20 kbar, 88M/1995; ¹⁸O/¹⁶O evidence for fluid-rock interaction, 88M/3788; oxidation state of, present condns., evolution, controls, 88M/2772; poss. hydration anomaly prior to Red Sea rifting, petrol. modelling evidence from Egypt, Wadi Natash basalt sequence, 88M/1308; processes, compn., 88M/2781; subcontinental, in areas of young volcanism, constitution, evolution of, 88M/4562; thermobarometry for garnet peridotites, detn. of thermal, compositional struct. of, 88M/2759; Australia, Queensland, McBride Province, fluid activity in, min. evidence of amphibole, scapolite origin in ultramafic, mafic xenoliths, 88M/1282; Canada, Quebec, Oka complex, sub-continental, Nd, Sr isotope systematics, bearing on evolution of, 88M/5667; SW Pacific, processes, petrol., 88M/6297; USA, New Mexico, Kilbourne Hole, beneath young continental rift, isotopic, tr. elem. compn., 88M/3973

-, -, xenoliths v. xenoliths, mantle

Earthquakes, thrust sheet motion and earthquake mechanisms, 88M/1593; northern North Sea, source parameters for, 88M/1591; Philippines, Puhagan geothermal field, micro, induced seismicity, 88M/1331; USA, Washington, along outer coast, evidence for great Holocene earthquakes, 88M/1592

Ecandrewsite, Australia, New South Wales, Little Broken Hill, and Spain, Sierra de Cartegena, San Valentin mine, new min., zinc analogue of ilmenite, 88M/4338

Eclogite, in mantle, exptl. data, 88M/2669; relation to mantle, 88M/2763; southern Africa, Proterozoic oceanic crust and evolution of subcontinental mantle, 88M/5533; W. Alps, Sesia-Lanzo zone, microstructl. study, 88M/4713; Austria, E. Alps, Koralpe and Saualpe, geochem., origin, 88M/5749; Bulgaria, central Rhodope metamorphic group, retrograde 88M/1479; metamorphism, Canada. Quebec, Gaspé, Mont Albert, retrograde, geothermometry, 88M/6419; Yukon, Ross River and Watson Lake areas, in mylonitic allochthons, 88M/3118; China, Jiangsu province, Donghai dist., Mg-rich staurolite in, 88M/6005; France, Aveyron, La Bessenoits, in gneissic massif, 88M/4712; Brittany, Léon, geochronol., geochem., new constraints on geodynamic evolution of Armorican Massif, 88M/3055; Corsica, Monte San Petrone, in metabasalts, recrystallization of, 88M/1477; Massif Central, Lévezou, evaluation of P-T condns. during metamorphism, 88M/6390; Rouergue area, Alvi-rich amphibole in, 88M/0992; Greece, Xanthi, Rhodope crystalline complex, amphibolitized, min. data, 88M/4725; Italy, W. Alps, coexisting amphiboles in, constraints on miscibility gap between sodic, calcic amphiboles,

88M/6023; Monviso ophiolite complex, geochem. modifications related to oceanic 88M/0801; metamorphism, retromorphic Fe-rich talc in, 88M/1474; Ligurian Alps, Voltri Massif, new micro-textural, min. chem. data on retrograde post-eclogitic assemblages, 88M/6399; Sesia-Lanzo zone, Monte Mucrone, Alpine cooling history, fission track evidence, 88M/1611; Norway, Eiksunddal complex, magmatic, metamorphic controls on chem. variations in, 88M/3036; Scotland, Glenelg, plagioclase breakdown, regeneration reactions in, 88M/6385; South Africa, Jagersfontein, and megacrysts from kimberlite, relationships between, 88M/1259; Switzerland, Sivretta nappe, geochem. constraints on nature, geotectonic setting of protoliths, 88M/6398; USSR, Anabar Shield, zircon-bearing, new variety of kimberlites, 88M/4740

 xenolith, *Tanzania*, Nd, Sr systematics, evidence for frozen min. equilibria in continental lithosphere, 88M/4892

Economic geology, ores, mins., introductn., (book), 88M/3339

Ecosystems, marine, measuring economic damages assoc. with terrestrial pollution of, 88M/3631; temperate forest, biogeochem. cycles in, 88M/3846

ECUADOR, morphol. of Wadati-Benioff zone and volcanism, 88M/4854; Plio-Quaternary volcanism, 88M/3254; pre-collision Cretaceous, Palaeogene volcanic rocks, geochem., tectonic setting, 88M/3976; Western Cordillera, Macuchi fm., low-grade metamorphism, geotectonic setting, 88M/3119

EGYPT, apparent phosphatic sediments, compn., origin, 88M/0176; geochem., REE patterns for terrestrial and marine skeletal apatites, 88M/3867; soils, rock, relief as soil factors, 88M/1772; crystallization of amphiboles in plutonic complexes, implications for magma evolution, 88M/4259; late Pan-African magmatism, crustal development, 88M/4488; SW, Triassic and Tertiary volcanic rocks, petrol., geochem., age relations, 88M/1309; Abu Khrug complex, Sr, O isotopic record of hydrothermal alteration of syenites, 88M/5636; Aswan, High Dam Western Quarry, migmatites, petrogr., 88M/1481; Eastern Desert, cooling history of Silurian to Cretaceous alkaline ring complexes, fission-track dating, 88M/0020; Eastern Desert, Hamata talc mine, metavolcanic rocks and assoc. mineralization, geochem., 88M/3943; N Eastern Desert, late Precambrian composite dyke, geochem., geochronol., petrogensis, 88M/6179; S Eastern Desert, younger granites and ring complexes, relation to mineralization, 88M/2843; Gemsa, Gulf of Suez, authigenic natroalunite in Miocene evaporites, 88M/2640; mineralization related to rift systems, 88M/1886; Gulf of Suez area, Cretaceous petroleum-bearing rocks, diagenesis, significance, 88M/2984; Nile Delta region, quartz grain surface textures, depositional interpns., 88M/2301; Ras Gharib segment of N. Nubian Shield, Rb/Sr geochronol. evolution, 88M/4898; Sinai, age of Feiran basement rocks, implications for late Precambrian crustal evolution in N. Arabian-Nubian Shield, 88M/4897; Ataga area, K/Ar, Rb/Sr whole-rock ages reset during Pan African event, 88M/3228; Ataqa metamorphic wedge, petrol., 88M/1487; NE Sinai, age of latest Precambrian volcanism, re-evaluation, 88M/0028; Tarr albitite, metasomatic plagiogranite from mainly non-intrusive protoliths, 88M/2944; Wadi Natash basalt sequence, petrol. modelling evidence of poss. hydration anomaly in upper mantle prior to Red Sea rifting, 88M/1308

Ekanite, gemstone, descriptn., 88M/2109; review, 88M/5506; *Italy*, *Pitigliano*, U-rich, occurrence, 88M/2589

Elbaite v. tourmaline

EL SALVADOR, *Izalco volcano*, blossite, α-Cu₂²⁺V₅⁵⁺O₇, new fumarolic sublimate, 88M/1083; howardevansite, new fumarolic sublimate, mineralogy, crystal struct., 88M/6091; lyonsite, new fumarolic sublimate, descripn., crystal struct., 88M/2662; mcbirneyite, new sublimate min. from fumaroles, 88M/2663

Electron microprobe analysis, general equation for estimating Fe³⁺ concentrations in ferromagnesian silicates, oxides using stoichiometric criteria, 88M/0075; introduction, (book), 88M/0099

 paramagnetic resonance, investigations of mins. by, 88M/3440

spin resonance dating v. age determination
 Electrum, Scotland, Tyndrum, from Au-Ag vein mineralization, 88M/5581

Elements, rare earth, cation-exchange column calibration by EDTA titration, 88M/0077; enrichment in crustal rocks, geochem... 88M/2118; in geol. materials, comparison of ICP, NAA for precise, accurate detn. of, 88M/5937; multielem. preconcentration of, for detn. at ppm-levels in geol. samples, 88M/3318; quantitative anal. by SIMS, 88M/3290; in geol. materials, ICP mass spectrometry, new technique for rapid or ultra-trace level detn. of, 88M/4945; in geol. samples, anal. by graphite furnace atomic absorption and XRF, 88M/4944; quantitative anals. in mins. by secondary ion mass spectrometry, 88M/5945

—, trace, in silicate rocks, XRF detn., 88M/1696; speciation by anodic stripping voltammetry: effects of added mercuric, acetate ions, 88M/0927; trace, XRF detn. of, in complicated matrices, 88M/3320

Ellestadite, fluorellestadite, USSR, South Urals, new min., 88M/4339

Elpasolite, *Italy, Tuscany, Cetine mine*, struct. refinement, 88M/1842

Emerald v. beryl

Enargite, *Peru*, *Quiruvilca*, occurrence with baumhauerite-like mineral, 88M/2632

Engineering geology, clay in, (book), 88M/4962; design of high *P*, *T* oedometer, 88M/0051

ENGLAND, septarian concretions from Kimmeridge Clay, diagenetic history, 88M/6319; total and extractable tr. elem.

contents of soils, 88M/1956; central bitumens, hydrous pyrolysis, gal chromatography-mass spectrometry study 88M/5891; N, regional maturation pattern for late Viséan rocks based on conodon colour, 88M/2962; Bowland Basin, buria dolomitization, porosity development in carbonate-clastic sequence, 88M/2963; / and N, patterns of late Caledonian intrusive activity from geophys., radiometric dating basement geol., 88M/6158; E, concealed Caledonides, multidisciplinary study prelim. results, 88M/4883; geophys. aspects of deep geol., 88M/6461; SW, ammonium distribn. in granites, 88M/3922; compn. of primary granite-derived fluid, fluid inclusion anal., 88M/3923; geodynamic significance of post-Variscan intrusive extrusive potassic magmatism, 88M/2204; posnjakite and polymorphs, occurrence W mineralization 88M/1563; magmatism, 88M/1875; SW, between Dartmoor and Bodmin moor, detailed gravity survey, shape of Cornubian granite ridge and new Tertiary basin, 88M/6159; SW, Cornubian batholith, compns. of trioctahedral micas in, 88M/4270; NW, late Caledonian (Acadian) transpression, timing, geotectonic significance, geometry, 88M/4378; Alston Block and Northumberland Trough, Lower Carboniferous mudstones, diagenetic studies, 88M/5014; Birmingham, air Pb concentrations inside, outside homes, comparison, 88M/0411; Brighton and Worthing area, geol. memoir, 88M/6114; central England microcraton, CHARM II, deep reflection profile within, 88M/2688; Chipping Norton area, geol. memoir, 88M/1414: E. Midlands, dispersed sedimentary organic matter in Coal Measure horizons, 88M/2423; Triassic sandstone aquifer, fluid flow, diagenesis, 88M/5810; East Anglia, Banham Beds, glacigenic sediments, petrol., 88M/4630; Flamborough Head region, tectonism, sedimentation, 88M/6110; Hastings, Dungeness area. geol. memoir, 88M/4631; Howick, elem. concentrations, relationship in coal formation, 88M/5697; Isle of Man Castletown area, Carboniferous rocks. stratigr., 88M/4635; Kimmeridge Clay fm. relationship between clay diagenesis and organic maturation in, 88M/5015; Lake District, Ordovician batholith, discussion 88M/4379; Ordovician composite lava flows, petrol., 88M/2892; Eskdale, role of tholeiitic magmatism, evidence from dykes 88M/6157; Lake District and adjoining areas, glossary of mins. of, 88M/3153; Lake District batholith, discussion on emplacement age, 88M/1602; Lewes area geol. memoir, 88M/4632; London Clay effect of weathering on strength of 88M/3418; Mendip Hills, relationship between light hydrocarbons and carbonate 88M/4125; Northumberland Coalfield, assessment of major, mino elems., 88M/4010; Pennine coalfields, min matter in coals, 88M/2407; N Penning Orefield, duftite, occurrence, 88M/4805

granite beneath, geochem., role in orefield mineralization, 88M/0627; serpierite. devilline, occurrence, 88M/1559; supergene cadmium mineralization, 88M/4804; S Pennine orefield, interpn. of discordant whole rock K-Ar data from hydrothermally igneous rocks, models of single-stage concomitant K-Ar exchange, 88M/4882; Castleton-Bradwell structurally, lithostratigraphically controlled fluorite deposits, exploration, extraction, 88M/1931; Ribble estuary, detn. of gamma emitting radionuclides in muds, silts, 88M/5317; Settle area, geol. memoir, 88M/6111: Southampton area, memoir, 88M/1415; W Midlands, Wyre Forest, elucidation of soil pattern, multivariate distribn., 88M/0201, spatial distribn., 88M/0202; Welsh Borderland, Bailey Hill fm., Ludlow Series turbidites reinterpreted as distal storm deposits, 88M/1146; Shelve inlier, evidence for dextral oblique-slip fracturing, implications for S British Caledonides, 88M/6112

- BEDFORDSHIRE, goethite ooids, growth mechanism, sandwave transport in Lower Greensand, 88M/4633
- BERKSHIRE, baseline geochem. condns.
 in Chalk aquifer, basis for groundwater quality management, 88M/2374
- -, CORNWALL, ceruleite, new locality, IR spectroscopy, 88M/1041; mins. of, (book), 88M/3336; wood tin, occurrence, nature, genesis, 88M/6049; W, Oligocene, Miocene outliers, bearing on geomorphol. evolution, 88M/2966; Altarnun, Treburland mine, occurrence, 88M/6471; birnessite. Carnmenellis, hydrothermal alteration of granite by meteoric fluid, 88M/0489; Carnmenellis granite, origin of saline groundwaters in, evidence from minor, tr. elems.. 88M/3828: Gramscatho basin, Devonian, tectonic envt., framework mode, geochem. evidence from turbiditic sandstones, 88M/2299; Lizard complex, Kennack gneisses, partial melts produced during ophiolite emplacement, 88M/4705; S. Crofty mine, tin mine, bismuthinite, 6 cm crystals, occurrence, 88M/1564; St Agnes, Wheal Coates, cassiterite pseudomorphs after orthoclase, 88M/1565; St. Austell, Li potential of granite, 88M/3572; kaolin, reexamination of kinetics of thermal desorption of dimethyl sulphoxide and N-methyl formamide from, 88M/4974; St. Austell pluton, F-rich leucogranite, phase equilibria, 88M/0460; west of Land's End Granite, evidence of crystalline basement,
- -, CUMBRIA, diffusive ion flux of non-marine origin in lake sediments, implications for elem. budgets in catchments, 88M/4009; particle size, radionuclide levels in soils, 88M/5316; Caldbeck Fells, philipsburgite, IR spectra, 88M/6078; Carrock Fell, intrusion of gabbro series as sub-horizontal tabular body, 88M/6156; Cumbrian coalfield, rozenite and other sulphate mins., occurrence, 88M/6469; Garrigill, Tynebottom Mine, Ag-Ni-Co min. assocn.,

88M/1051; Hartley Birkett, Higher Longrigg mine, cuproadamite, tennantite, occurrence, 88M/6470; S. and W. of Keswick, stability of chlorite-quartz assemblages, 88M/1002; Pennines, aurichalcite, occurrence, 88M/4802; Shap, apophyllite, occurrence, 88M/3152

—, DEVON, mins. of, (book), 88M/3336; Permian K-rich volcanic rocks, petrogenesis, tectonic setting, geol. significance, 88M/2893; phlogopite and assoc. mins. from Permian minettes, 88M/2578; Dartmoor, calc-silicate mins. from granite, 88M/6003; Yarner Wood, hardpan podzol, features of, 88M/0203

—, HAMPSHIRE, *Hampshire Basin, Barton fm.*, glauconitization of detrital, 88M/2965

- —, LANCASHIRE, and Wirral, radionuclides in coastal, estuarine sediments, 88M/5318
- —, LINCOLNSHIRE, burial cements in Lincolnshire Limestone, Sr isotopic compn., origin, 88M/2298
- —, NORFOLK, akaganéite occurrence in Recent oxidized carbonate concretions in reduced intertidal, sandflat sediments, 88M/2620; Hunstanton, new seismic refraction evidence on origin of Bouguer anomaly low, 88M/6113
- —, OXFORDSHIRE, Harwell region, application of U-series disequilibrium to studies of groundwater mixing, 88M/5811
- —, WARWICKSHIRE, country around Warwick, geol. memoir, 88M/2964
- YORKSHIRE, dickite, in fireclays, 88M/3397; Aysgarth, Wetgrooves mine, mins. from, 88M/1560; secondary Middleton Tyas, Cu mines, mins. from, 88M/1562: Pennines. aurichalcite. occurrence, 88M/4802; strontianite, 88M/4803; occurrence, Yorkshire coalfield, Silverwood Colliery, baryte, rare occurrence, 88M/1561; Speeton, Cretaceous phosphorite deposit, min., 88M/1413; Yorkshire coalfield, maceral concentrates from coal seams. characterization by anals., pyrolysis 88M/5889

Enstatite v. pyroxene

Enthalpy studies, enthalpies of formation of polymorphs α-Mg₂SiO₄, β-Mg₂SiO₄, γ-Mg₂SiO₄, 88M/3722; and entropy, of 3CAO·Al₂O₃·CaCO₃·11H₂O, 88M/3683; measurement of enthalpy of mixing of by liquid system CaO-B₂O₃ 88M/3711; theoretical calorimetry, estimation of binary-compound enthalpies of formation on basis of partial ion characteristics, 88M/5350

Eosphorite-childrenite, *Portugal, Mangualde*, occurence, 88M/6081

Ephesite, struct. refinement, in Cl symmetry, 88M/0257

Epidote, calorimetric data on thermodynamics, 88M/2063; from geothermal areas, compositional variations in, 88M/2548; gem quality, descriptn., 88M/2108; medium iron, struct. refinement, 88M/5094; struct., EXAFS study of Gd, Er, Lu site location in, 88M/5095; Japan, Shikoku, Sanbagawa, REE-bearing, from pelitic schists, 88M/2128; USA, Colorado, Boulder

- County, phenocrysts in dacitic dykes, 88M/0980
- —, allanite, Finland, Outokumpu, Cr-rich, occurrence, data, 88M/4246; Italy, Novara, Maddalena quarry, occurrence, 88M/1577
- —, clinozoisite, calorimetric data on thermodynamics, 88M/2063
- —, piemontite, Mn-Fe-Al, stability relations, 88M/2064; Japan, Hokkaido, Tokoro belt, from manganiferous ore deposits, 88M/6007
- —, zoisite, calorimetric data on thermodynamics, 88M/2063; neutron diffraction study at 15 K and X-ray study at room T, 88M/5093; Greece, Xanthi area, Rhodope zone, in marbles, fluid phase compn., 88M/4724; Tanzania, Merelani area, vanadiferous, (tanzanite), fluid inclusions in, 88M/2547

Epistilbite v. zeolite

Epithermal deposits, volcanic-hosted, acid-sulphate and adularia-sericite types, comparative anatomy, 88M/0297

Epsomite, crystallization from aqueous solutions, 88M/5432; growth kinetics, 88M/5431

Equilibria, chem. equilibrium algorithm for highly non-ideal multiphase systems: free energy minimization, 88M/0437; computation of chem. equilibrium in complex systems containing non-ideal solutions, 88M/1986; heterogeneous, microcomputer algorithm for calculating, 88M/1987; mixed-volatile, THERMO: computer program for calculation of, 88M/0430

Erionite v. zeolite, offretite

Ertixiite, China, Xinjiang, Altay pegmatite mine, new min., 88M/1088

Erythrite, Wales, Dolgellau, occurrence, 88M/1566

Estruvite, crystallization in silica gel 88M/5445

ETHIOPIA, W, SE, Cainozoic magmatic province, geol., geochronol., geodynamic implications, 88M/0021

Ettringite, *Greece, Laurium*, occurrence, 88M/4823; *Pacific Ocean, Tuvalu, Funafuti*, occurrence, 88M/6481

Euclase, thermodynamic parameters of, 88M/0457

Eucryptite, α -, natural, synthetic, crystal structs., 88M/3480

EUROPE, Cretaceous metallogenic formations in platform and adjacent areas, 88M/1872; deuterium content of palaeowaters inferred from isotopic compn. of fluid inclusions trapped in cave deposits, 88M/5878; Central, Cu-Ni deposits, classification, examples, 88M/3537; geochem., geol. constraints on formation of unconformityrelated vein baryte deposits, 88M/2156; mantle xenoliths, occurrence, 88M/2744; Precambrian crustal components, plutonic assocns., plate envt. of Hercynian fold belt, Nd, Sr isotopic study, 88M/5532; weathering, mass balance in small drainage basins, envtl. applications, 88M/4024; E European Platform, radiolytic enrichment and brines in crystalline basement, 88M/3832; siliceous ironstones of Precambrian formations, 88M/3894; W,

geochem. comparison between minettes and kersantites from Hercynian orogen, tr. elem., Pb-Sr-Nd isotope constraints on origin, 88M/3926; NW, diagenetic clay mins., K/Ar dating, evidence for Jurassic thermal anomaly, 88M/0010; petroleum geol., conference proceedings, (book), 88M/4967

Evaporite basins, marine, meteoric water input, new explanation for cyclic deposition in, 88M/0753

Evaporites, v. also salt; isotope compns. of inert gases from, 88M/5711; sediments of evaporite margins, characterized by min. assocn. of fibrous quartz, siliceous sulphate pseudomorphs, 88M/6310; sulphate mins., genesis, distribn. of, 88M/4646; Belgium, Liège, Chaudfontaine, sulphate, and mineralization, connection between, 88M/3602; Botswana, Okavango Delta, carbonate accumulation on islands, 88M/1422; Canada, New Brunswick, hilgardite-4M from, mineralogy, 88M/2623; Caspian-depression, marginal areas, S isotope compns., 88M/0770; China, Qaidam basin, formation, evolution, disappearance of Dadong palaeolake, 88M/2989; Qinghai, Chaidamu basin, from salt playa, 10Be distribn., U-series dating, 88M/2316; Egypt, Gemsa, Gulf of Suez, Miocene, authigenic natroalunite in, 88M/2640; France, Paris Basin, Upper Lutetian, petrol., diagenesis, 88M/0764; Morocco, in N. Atlantic Rift setting, geochem., 88M/5706; Spain, La Mancha, sedimentation in playa lakes, 88M/2972; USA, California, Salton Sea geothermal system, metamorphosed Plio-Pleistocene, and origins of hypersaline brines, fluid inclusion evidence, 88M/5545; North Dakota, mineralogy, groundwater chem. assoc. with saline soils, 88M/3434; Ohio, Salina group, celestite replacements of, 88M/3006

Exploration, biogeochemical, Sweden, plants from stream banks, 88M/2460; USA, Colorado, Royal Tiger mine, temporal variation of metal concentrations, 88M/0919

- —, geobotanical, for mins. in humid tropics, 88M/4175; USA, NE Washington, response of Douglas fir to uraniferous groundwater, 88M/4178
- -, geochemical, geochem. reports, guidelines for surficial geochem. surveys, 88M/3849; geochem, surveys, expts, on use of selective extraction for anomaly classification, 88M/0922; ICP anal., 88M/3293, 88M/3294; integral rock anal., new approach, 88M/0923; regional geochem. prospecting, improving anomaly selection by statistical estimation of background variations, 88M/0902; use of electrothermal excitation AAS in, 88M/3295; Saudi Arabia, in arid envts., problem of æolian contamination, 88M/2467
- geochemistry, AAS, ICP-OES anals., current practice, review, 88M/2496; anomaly recognition for multi-elem. geochem. data, background characterization approach, 88M/0896; biogeochem. workshop, 88M/0897; in low-latitude areas, problems, techniques, 88M/2472; practical

problems, (book), 88M/0104; till geochem. workshop, 88M/0898; stone line profiles, importance in, 88M/5926; Canada, historical perspective, 88M/0866; USA. California, Land Management Wilderness Study Areas, reconnaissance geochem. studies, 88M/0892

—, geothermal, role of alteration mins. in, 88M/1769; using surface Hg geochem., 88M/0893; Okuaizu geothermal field, use of Petrex fingerprint soil gas geochem. technique in, 88M/5929

Fahlore, electrical props., 88M/6444 Fassaite v. pyroxene

Fatty acids, non-solvent extractable, from recent marine sediments from diff. envts., compositional similarities of, 88M/0856

Faujasite v. zeolite

Fayalite v. olivine

- Feldspar, activated complexes pH-dependence of rates of hydrolysis, 88M/3731: aluminosilicate ceramics microstruct. growth, geochem., 88M/2078; crystal struct., phase relations, 88M/3469; detrital, in sandstones, diagenetic kaolinization, illitization of, SEM study, 88M/0161; diagenetic chloritization of, in 88M/1409; 'replacement' by Ti oxides in sandstones, 88M/1410; end-member, comparative compressibility of, 88M/6438; low-T specific heats, thermodynamic parameters of, and products of transformation under simulated supergene condns., 88M/5477; reaction rate-surface area relationships during early stages of weathering, 88M/2007; ternary, modelling, thermometry, 88M/5476; zoned ternary, in exsolution microtextures, mechanisms, 88M/6039; Canada, Ontario, Sudbury igneous complex and Onaping fm., mineralogy, 88M/2594; Germany, shock-wave deformed grains from Ries meteorite impact crater, characterization, 88M/1008; Greenland, Klokken intrusion, zoned ternary, sidewall crystallization, 88M/6147; Sweden, detrital, in Proterozoic sandstones, SEM study of dissolution textures, 88M/6040; USA, California, sand-sized kaolinized pseudomorphs, in soils, 88M/5063
- —, adularia, from hydrothermal vein deposits, extremes in structl. state, 88M/1812
- -, albite, authigenic, in Devonian limestones. origin, significance, 88M/2969; exptl. studies of thermal grooving in olivine and albite melt system, 88M/0519; liquid, glass, relaxation mechanisms, effects of motion in. high T NMR study, 88M/5121; low, high, structure-energy calculations, 88M/0260; ordering behaviour using modified sequential construction method, 88M/5478; plus forsterite at high T, P, stability, petrol. implications, 88M/5385; quantitative phase anal., XRD, 88M/1006; role of surface speciation in low-T dissolution of, 88M/3706; Sweden, Siljan granite, clouded-untwinned, 88M/1010

—, alkali, Ar-loss by, 88M/4868; determining (Al,Si) distribn., strain, using lattice parameters, diffraction-peak position-88M/0259; discovery of primitive class precursors on, 88M/1768; exsolution in 88M/3737; lattice-misfit theory transformation twinning in, 88M/1810 partially outgassed, Ar diffusion in, insight from 40Ar,39Ar anal., 88M/0041

—, amazonite, colorimetry, 88M/0581 Australia, Broken Hill and Gecometamorphosed sulphide deposits occurrence, implications, 88M/2592 Canada, Northwest Territories, Portman Lake, occurrence, 88M/2591

—, andesine, Canada, Quebec, St-Urbain, calcic myrmekite, poss. evidence for involvement of water during evolution or andesine anorthosite, 88M/1009

—, anorthite, antiphase domains in, 88M/3474 non-stoichiometric Eu-, crystal struct. explanation of Eu-positive anomaly 88M/3475; reaction garnet + clinopyroxene + quartz = 2 orthopyroxene + anorthite potential geobarometer for granulites 88M/5456; redetn. of breakdown reaction improvement of plagioclase–garnet–Al₂SiO₅–quartz geobarometer, 88M/5481

 –, anorthoclase, Ca-rich, microstruct., phase transitions, 88M/3471; Antarctica, Mt Erebus, Ca-rich, occurrence with volcanic glass, 88M/3470

—, celsian, fifteen ceramic phases, XRD powder patterns, 88M/1011

—, cleavelandite, named after Parker Cleaveland (1780–1858), 88M/4841; USA Maine, Topsham, occurrence, 88M/4830

- H-, Li-, preparation by ion exchange, 88M/5484
- -, K-, exptl. study of reaction biotite + 3 quartz = 3 orthopyroxene + K-feldspar + water, 88M/5388; from intrusive and metasomatic formations, Au in, 88M/0606 K-Na, megacryst inclusions in alkalic basalt, typomorphism, IR spectroscopy 88M/1515; K-Na, single crystals, Al-S disordering kinetics during isotherma annealing of, 88M/3738; pegmatitic, from metamorphic complexes, X-ray luminescence. 88M/1514; phengite geobarometry based on limiting assemblage with K-phlogopite, quartz, 88M/0561 reaction muscovite + quartz → andalusite + K-feldspar + water, growth kinetics mechanism, 88M/5393; study of (010)[101 and (001)[110]/2 dislocations in, by HRTEM and modelling, 88M/5120 Bulgaria, Rila Mt., Kalin granite, structl transformation, geochem., 88M/1004 Portugal, from granitic rocks, comparison of structl. state parameters, 88M/1005 South Africa, Zaaiplaats area, Bushveld, Ba partitioning between coexisting K-feldspars plagioclase in granites, 88M/2593; USSR Middle Urals, Revdinskii region, unusua occurrence, 88M/1266; Zaïre, Roan o Shaba, authigenic, from volocanic rocks 88M/1007
- —, labradorite, OH groups in nominally anhydrous framework structs.: IR study 88M/0261; under hydrothermal condns

- complexity of min. dissolution, high resolution scanning Auger microscopy, 88M/3741
- —, microcline, Rb-enriched, quantitative phase anal., XRD, 88M/1006; Norway, Brøttum fm., albitized grains of post-depositional, probable detrital origins, 88M/6041; USA, Wisconsin, Wausau complex, Proterozoic, in pegmatite, 88M/1811; USSR, Lake Ladoga, re-examination, min. implications, genetic considerations, 88M/4275; Yugoslavia, Alinici, in hydrothermal veins, 88M/6077; Zambia, Lukashasi Bridge, pegmatitic, min., chem. compn., 88M/6038
- myrmekite, calcic, Canada, Quebec, St-Urbain, poss. evidence for involvement of water during evolution of andesine anorthosite, 88M/1009
- -, oligoclase, effect of oxalate on dissolution rates, 88M/2008
- —, orthoclase, alkali-moonstone, occurrence, characteristics on single XRD, non-equilibrium transformation, solvus, studies, 88M/2079; England, Cornwall, Wheal Coates, cassiterite pseudomorphs after, 88M/1565
- -, plagioclase, and aqueous chloride solutions at 600°C, 1.5 kbar and 750°C, 2 kbar, Sr distribn. between, 88M/2016; and aqueous chloride solution, cation and O isotope exchange between, 88M/0483; and aqueous salt fluid, distribn. of Na, Sr between, at 800°C, Pfl 2 kbar, 88M/5480; anion, cation partitioning between olivine, plagioclase phenocrysts, and host magma, ion microprobe study, 88M/2126; application of theory of satellite reflection to struct. of, 88M/3473; calcic, struct. images, superstruct. model, 88M/1813; computerassisted detn., presentation of crystallographic orientations of, on basis of universal-stage measurements, 88M/1665; crystal growth kinetics in igneous systems, I atm. expts., application of simplified growth model, 88M/0569; deanorthitization in hydrothermal alteration, 88M/6359; guide to twinning, petrol. significance, 88M/2595; kinetics of interaction with water-salt fluid at 500°C, Pfl 1 kbar, 88M/3740; Korekawa's theory of satellite reflections of periodic superstruct., 88M/3472; natural deformation fabrics, implications for slip systems, seismic anisotropy, 88M/6439; sense of shear in high-T movement zones from fabric asymmetry of, 88M/6376; Alps, anorthite contents of, 88M/2596; Italy, Western Alps, Insubric Line, from amphibolite and greenschist facies rocks, preferred lattice orientations, 88M/1476; Mexico, Iztaccíhuatl volcano, laser-interferometry study of oscillatory zoning in, record of magma mixing, phenocryst recycling in calc-alkaline magma chambers, 88M/4276; Norway, Jotunheimen, fabric development in high-grade shear zone, 88M/4374; Seiland, in pelitic blastomylonitic schists, variations in compn. with declining metamorphic grade, 88M/2545; Poland, Cracow, Zalas, adularization of, in rhyodacite, 88M/3023; Scotland, Glenelg,

- breakdown, regeneration reactions in Grenville kyanite eclogite, 88M/6385; USA, Washington, Mt. St. Helens, laser-interference, Nomarski interference imaging of zoning profiles in phenocrysts from 1980 eruption, 88M/4277; USSR, Kandelaksha Bay, Kolvitska Massif, ornamental violet pseudomorph after, 88M/0582
- , -garnet-Al₂SiO₅-quartz geobarometer, redetn. of anorthite breakdown reaction, improvement of, 88M/5481
- —, sanidine, high, from upper mantle, crystal struct. refinement, 88M/1809; location of tr. Fe³⁺ ions in, 88M/5119; volcanic, T effect on homogenization T of fluid, melt inclusions in, 88M/4439; USA, Wisconsin, Wausau complex, Proterozoic, in pegmatite, 88M/1811
- Felsite, *Norway, Finnmark*, early Proterozoic, davidite-loveringite in, 88M/6055
- Ferberite, France, Échassières, stockwork, evolution, crystallochem., 88M/4306
- Ferricretes, S. and E Australia, and related surficial ferruginous materials, investigations, 88M/2993

Ferrierite v. zeolite

Ferrihydrite, *USA*, *Hawaii*, in soils, implications for classification, 88M/5060

Ferrite, structl., magnetic, Mössbauer studies, 88M/2033; Ni_{1+2x}Fe_{2-3x}Sb_xO₄, specific heat capacity, thermal conductivity, thermal diffusivity in T range 400--1000 K, 88M/0518

Ferroaxinite v. axinite

Ferrobustamite, synthetic, heat capacity, 88M/2068

Ferrolatite, USA, Idaho, Magic Reservoir eruptive centre, hybrid, origin, 88M/0744

- Ferromanganese concretions, New Zealand, in soils, REE, tr. elems. in, 88M/4041; Pacific, Clarion–Clipperton fault zone, min. compn., internal texture, 88M/3878
- crusts, EDX anal. using conventional ZAF corrections, 88M/1662; Atlantic, Sierra Leone Rise, equatorial Mid-Atlantic Ridge and New England Seamount Chain, chem., 88M/2294; mineralogy, Hawaiian Archipelago, geochem., 88M/0652; Pacific, Hawaiian Exclusive Economic Zone, Necker Ridge area, extractive metallurgy of, 88M/3559; Pacific, Marshall Is., Co-, Pt-rich, and assoc. substrate rocks, 88M/3910; SW Pacific, buserite in, 88M/1034; USA, E Coast, Lydonia Canyon, on glacial erratics, compn., morphol., 88M/2339
- deposits, Brazil, Urucum, O isotope study,
 88M/3992; Fiji, Viti Levu, genesis,
 88M/3876; W. Central Pacific Ocean,
 Kiribati and Tuvalu region, geochem.,
 88M/3880; USA, Gulf of Alaska seamount province, mineralogy, chem., origin,
 88M/5606
- nodule wastes, processed, sea-water leaching of tr. metals from, 88M/3877
- nodules, heat and mass transfer dynamics in near-bottom layer under nodule formation, 88M/2144; *India, Central Indian Basin*, geochem., 88M/2314; *Central Indian Ocean* basin, classification, inter-elem. relationships, 88M/3879; *Pacific*, Cd in,

- 88M/2181; Mo in, 88M/5728; periodic trends in elem. enrichments in, role of lattice energies, 88M/5837; processes controlling heavy metal distribn. in, 88M/3517; French Polynesia, Co-rich, characteristics, 88M/2324; NE Depression, organic matter in, 88M/4149; N equatorial Pacific, DOMES Site A, REE geochem., 88M/2327
- Fersilicite, ref. XRD powder patterns, 88M/4286
- Fibrolite, *Ireland*, *Donegal*, in contact aureoles, 88M/0976
- FIJI, relationship between clay content and 15 bar moisture retention for soils, 88M/5048; soils, extractable Al and pH, 88M/0131; Emperor, gold telluride deposit, min., geochem. studies, 88M/0650; Emperor mine, quartz-gold-telluride veins, formation of, 88M/5285; Mt Kasi, breccia formation, relation to gold mineralization, 88M/5287; Nasilai ni Rewa and Naila, petroleum seeps, hydrocarbon anals. by gas chromatogr., 88M/0854; Serua, Nacorogo Creek, geol. field guide, 88M/1395; Taveuni, soils from basaltic ash, mineralogy, 88M/0211; Vatukoula, Emperor epithermal gold deposit, geol., 88M/5286; Viti Levu, Fe-Mn deposits, genesis, 88M/3876; soils, clay mineralogy, 88M/0212; SE Viti Levu, Hunter fracture zone, mineralization in onshore expression of, 88M/5227

Filipstadite, *Sweden*, *Långban*, new derivative of spinel, 88M/6090

FINLAND, brackish and saline groundwater, 88M/3825; depositional evolution of Svecofennian supracrustal sequence, 88M/2680; Fe, Mn oxides in groundwater treatment plants, 88M/1033; Nattanen-type granite complexes, petrol., 88M/2818; props. of iron oxides from lake bottoms, 88M/0162; Proterozoic, Archaean metasediments, provenance, Sm-Nd isotopic study, 88M/3042; Proterozoic granitic rocks, granite types, metallogeny, relation to crustal evolution, 88M/2817; Sm-Nd, U-Pb, Pb-Pb isotopic evidence for origin of early Proterozoic Svecokarelian crust, 88M/2201; E, evolution in compn. of Archaean granitic rocks, controlled by time-dependent changes in petrogenetic processes, 88M/2821; SE, early Proterozoic deposition, deformation at Karelian craton margin, 88M/2679; S, synkinematic Svecokarelian granitic rocks, characteristics, geol. setting, 88M/2819; SW, intrusive-like tectonic breccia, occurrence, 88M/3045; Åland, late Svecofennian magmatism, tectonism, petrol., 88M/2820; Bothnian schist belt, revision of Proterozoic-Archaean boundary, 88M/2202; Central Puolanka group, Precambrian regressive metasedimentary sequence, 88M/3041; Eräjärvi, bityite, comparison with related 88M/2590; Li-Be brittle micas, Fennoscandia, Belomorides, and Lapland, granulite belt, Proterozoic collisional orogenic belt, petrogenesis, evolution, 88M/3034; Haapaluoma pegmatite quarry, kunzite, 88M/2564; Halsua, Tienpää, Proterozoic porphyry Cu occurrence,

characteristics, 88M/1903; Honkamäki-Otanmäki region, Pikkukallio, aegirine, riebeckite, in alkali gneiss, 88M/2561; Jormua mafic-ultramafic complex, early Proterozoic ophiolite, petrol., 88M/2934; Karelia, min., geochem. aspects of Cr-bearing skarn mins., 88M/2613; Koitelainen layered intrusion, loveringite, occurence, 88M/1026; Lake Soijärvi basin, diatomite deposit, chem. compn., porosity, melting T, 88M/1929; Lapinlahti-Varpaisjärvi area, Archaean basement, U-Pb, K-Ar age relations, 88M/1601; Lapland, greenstone belt, stratigraphic, depositional features, 88M/6383; high grade metamorphism in granulite belt, 88M/1121; Lapland, Kaarestunturi, Au-bearing Kaarestunturi, 88M/0315; Lylyvaara. Archaean migmatitic gneiss, structl., U/Pb isotopic study, 88M/0006; Orijärvi, triple-, pyriboles, mineralogy, double-chain 88M/0989; Outokumpu, Cr-rich allanite, occurrence, data, 88M/4246; ore type, 88M/0287; tectonized actinolite-albite rocks, field, geochem. evidence for mafic extrusive origin, 88M/3044; Outokumpu assemblage, early Proterozoic, petrol., 88M/6106; metavolcanic rocks, nature, significance, 88M/3047; Puolankajärvi fm., metamorphic behaviour, petrogenetic significance of Zn in amphibolite facies, staurolite-bearing mica schists, 88M/0797; Sattasvaara, pyroclastic komatiite complex, petrol., 88M/2890; volcanic schist zone, light hydrocarbon gases, anals., 88M/5901; Savonranta, metamorphic development of cordierite-bearing layered schist and mica schist, 88M/3046; Svecofennides, Mustio dome, evolution, 88M/1467; gneiss Tampere schist belt, early Proterozoic metagreywacke-slate turbidite sequence, 88M/2958; early Proterozoic metavolcanic rocks, geochem., tectonomagmatic affinities, 88M/3048; Tipasjärvi, Archaean greenstone belt, komatiite, fractionation processes, 88M/1231; Turku granulite area, metamorphic reactions, P-T condns., 88M/3043; Tuusniemi, Paakkila, vivianite, occurrence, anals., 88M/2652

Fission track dating v. age determination Fission track records, sliding table for rapid

evaluation of, application, 88M/3258

Flint v. chalcedony

Florencite, significance of lithiophorite interface between cryptomelane and, 88M/1077; USA, Illinois, occurrence, 88M/6478

Fluid inclusions, anal. using nuclear magnetic resonance, 88M/1694; and P-T estimates in deep-seated rocks, 88M/3791; homogeneous, microthermometric behaviour, 88M/3875; quantitative laser Raman microprobe spectroscopy for study of, 88M/5539; synthetic, detn. homogenization T, densities of supercritical fluids in system NaCl-KCl-CaCl2-H2O using, 88M/5396; synthetic, in natural quartz, SEM/EDA anals., evaluation of method, 88M/5538; synthetic, solubility relations in system NaCl-KCl-H2O under

vapour-saturated condns., 88M/5540; USA, Florida, Miami Limestone, in vadose cements, petrogr., 88M/5542

— mixtures, in, C-H-O system at high P, T, 88M/3839

-- /rock interaction, general equations for modelling, using tr.-elems., isotopes, 88M/0601

in lithosphere, Fluids, CO_2 - H_2O , experimentally-determined wetting characteristics of, implications for fluid transport, host-rock phys. props., fluid inclusion formation, 88M/3674; dense, in micropores, molecular-dynamics study of, 88M/3693; immiscible, in metamorphism, implications of two-phase flow for reaction history, 88M/6357; O fugacity, tin behaviour in, 88M/3694; SW England, primary granite-derived, compn., fluid inclusion anal., 88M/3923

Fluorapatite v. apatite

Fluorapophyllite v. apophyllite

Fluorellestadite v. ellestadite

Fluoride, alkaline earth, dissolution kinetics, 88M/2057; detn. with fluoride selective ion electrode using standard addition method, 88M/4932

Fluorine, adsorption by soils, characteristics, 88M/4000; behaviour in metapelite during metamorphism near gabbro intrusion, 88M/3026; photometric detn. in rocks, mins., 88M/0076; rapid, non-destructive method of detn. using fast-neutron activation anal., 88M/4933; use as pathfinder for volcanic-hosted massive sulphide deposits, 88M/2505; New Zealand, F detn. in coals by F ion-selective electrode method, 88M/5727; Poland, Zıllawy Wiślane region, in groundwater, 88M/5814—deposits, Canada, geol., 88M/1945

Fluorite, from endogene deposits, Rb, Li, Cs in, 88M/5577; natural, REE, thermal history, colour, 88M/3869; Bulgaria, Madan ore region, Erma-reka sector, gas-liquid inclusions in, 88M/0294; France, Massif Central, Ussel dist., Pb isotopic, 88M/3928; Germany, anal., Fichtelgebirge, Epprechtstein, occurrence, 88M/4814; Italy, Sicily, hydrothermal, use of Sr isotopes to determine sources of, 88M/5578; Spain, Sierra del Guadarrama, assoc. with sulphides, fluid inclusion study, 88M/6069; relationship with baryte. 88M/5194; Tunisia, Zriba Guebli, hydrocarbon fluid inclusions in, IR microspectroscopy, 88M/3870; Illinois, Hardin County, Harris Creek fluorspar dist., occurrence, 88M/6479; USSR, Khingan, from tin deposits, REE in, as indicators of min. formation condns., 88M/5927; Yugoslavia, Ravnaja, liquid/gas inclusions of, microthermometric studies,

deposits, regularities of formation, new types, 88M/1858; Brazil, classification, 88M/5310; England, S. Pennine orefield, Castleton-Bradwell area, structurally, lithostratigraphically controlled, exploration, extraction, 88M/1931

genetic interpn., 88M/0305

— -(baryte-)Pb-Zn deposits, Spain, Alpujarrides, Alpine Triassic, facies control of strata-bound ore deposits in carbonate rocks, 88M/1878

 -- baryte mineralization, S. Germany, geol setting, age relationship, with ref. to late Palaeozoic unconformity, 88M/3603

 witherite mineralization, Canada, British, Columbia, Liard River area, carbonatehosted, role of basinal brines, thermal springs in genesis of, 88M/0660

Fluorspar, metallurgical-grade, spectrophotometric detn. of silica in, 88M/4935

Foraminifera, benthic, N. Atlantic, later Pliocene variations in C isotope values, ?biotic control, 88M/0761

Forsterite v. olivine

Fossil forests, USA, Washington, Mt. St. Helens, burial of trees by volcanic eruptions, implications for interpn. of, 88M/1438

Fowlerite v. rhodonite

Fractional crystallization v. crystallization, fractional

FRANCE, anhydrites, carbonates, isotopic 88M/4018; dissolved geochem., behaviour in estuaries, consequences for Cd supply to ocean, 88M/3625; geochem. soil-surveying for W deposits, 88M/2461; Au-bearing shear zones, Hercynian 88M/3528; non-polluted stream waters, chem. compn., 88M/4083; SE, francolite, diagenetic indicator, 88M/6076; S, evidence for slowly changing ⁸⁷Sr/⁸⁶Sr in runoff from freshwater limestones, 88M/5812; W, continental crust formation seen through Sr, Nd isotope systematics of S-type granites in Hercynian belt, 88M/5627; Alps, exptl. transport of Si, Al, Mg in thermal solutions, application to vein mineralization during high-P, low-T metamorphism, 88M/5376; Rioupéroux-Livet fms., lithostratigr., petrogr., 88M/3059; W Alps, Chamrousse ophiolite complex, Sm-Nd isotopic study of 500 m.y. old oceanic crust, 88M/0705; 496 m.y. age of plagiogranites, evidence of Lower Palaeozoic oceanization, 88M/4886: Ardennes, Hercynian metamorphism along main anticline, 88M/1469; liquid-, gas-bearing inclusions in quartz, optical, anal. studies, 88M/0611; Ardèche, diorite intrusion into granite, 88M/6163; Plateau des Coirons, zeolitization of basanite flows in continental envt., example of mass transfer under thermal control, 88M/6234; Ariège, bauxite deposits, dolomitization, dedolomitization of carbonate platform, 88M/6324; Lherz and Freychinède ultramafic bodies, amphibole pyroxenite veins, geochem., 88M/0706; Ariège, Salau, compositional evolution of calc-silicates from skarn deposit, 88M/2576; Salau, Fourque scheelite deposit, granodiorite, petrogr., geochem., 88M/2833; Armorican Massif, Precambrian volcanism, geochem., 88M/0701; Aveyron, La Bessenoits, gabbros, corona norites, eclogites, in gneissic massif, 88M/4712; Aveyron -Massif central, Cantal, Châtaigneraie dist., W deposits, research, 88M/1876; Bouvante, eucrite, chem., petrol., mineralogy, 88M/0943; Brittany, Champtoceaux nappe, eclogitic metamorphism in Hercynian chain,

Huelgoat intrusion, REE 88M/6389: partitioning in magmatic cordierite, implications for cordierite-bearing granitic 88M/3925; Léon, eclogites. geochronol., geochem., new constraints on geodynamic evolution of Armorican Massif. 88M/3055; St. Malo massif, behaviour of Rb-Sr whole rock and U-Pb zircon systems during partial melting, shown in migmatitic gneisses, 88M/1604; Vilaine, progressive changes in min. assemblages metamorphic phases, 88M/2569; R. Vilaine estuary, controls on P-T-t deformation path from amphibole zonation during progressive metamorphism of basic rocks, 88M/6387; Brittany, Yaudet pluton, W, Mo mineralization, 88M/3575; Champagne, movement of water in unsaturated zone in chalk, isotopic, chem., study, 88M/5868; Cholet area, Palaeozoic magmatic series, attributed to Ordovician-Silurian extensional tectonics, 88M/2206; Cézallier, min. springs, chem. study, evolutionary model, 88M/4085; tr. elem. concns. in spring-water, 88M/2376; Cézallier region, spring waters, isotopic, geochem. study, sources, 88M/4084; Cézallier, Chassole, geothermal system, geol. borehole reconnaissance, contraints. 88M/4086; Chassole gneiss, hydrothermal alteration, petrogr., fluid inclusions, stable data, 88M/3890; Chassolle borehole, volcanism, chronol., 88M/3211; Chassolle geothermal area, volcanic rocks, petrol., 88M/4550; Deux-Sèvres, chloritized amphibole-schist, marine and supergene alteration processes, 88M/0164; Dôme de l'Agout, ammonium-bearing micas in metamorphic rocks, 88M/0602; Ernée and Trégomar, layered gabbro complexes, petrol., 88M/2831; N. Finistère coast, high concentrations of titanite in heavy beach sands indicate longshore drift, 88M/6323; Gard, Trèves, Liassic Zn-Pb orebody and dolomotized host-rock, organic matter, petrogr., 88M/1417; Garonne River, transport in solution and suspension, 88M/4088; Gironde Estuary, and Bay of Biscay, Hg concentrations in near shore surface waters, 88M/0823; Grenoble, origin of waters of aquifers in alluvial plains, 88M/5869; Hautes-Alpes, Grès du Champsaur fm., andesite pebbles from conglomerates, K/Ar dating, 88M/2970; Haute Loire, Espaly, gem-quality zircons, fission-track mapping of U in, 88M/0974; Haute-Provence, Vergons measurements of degree of diagenesis in sediments: organic matter maturation, smectite transformation, 88M/6361; Haute Vienne, Bernardan, occurrence of Ce in uraniferous mineralization in episyenite, 88M/0629; Haute Vienne, Saint-Yrieix, and Aude, Salsigne, application of TL to exploration of stratabound gold deposits, comparison of quartz TL props, 88M/0903; Hercynian massifs, dykes, chem. compn., comparison with other plutonic rocks, 88M/0704; Hérault, Bois Madame, Pb-Zn mineralization confined within carbonate platform, 88M/3576; Hérault, Lodève,

with abundant phlogopite megacrysts, descriptn., 88M/1235; source rock potential, oil alteration in uraniferous basin, 88M/4133; Lodève area, anals. of Pb, U isotopes in groundwater, application to prospection of concealed U deposits, 88M/2377; Lodève Basin, U redox chem., Fe, Ra geochem., U isotopes in groundwaters, 88M/4090; Monts de l'Orb, La Rabasse, Pb-Zn mineralization, 88M/5247; Hérault, Roques-Arièges, basaltic dyke swarm, magma propagation from deduced vesicle orientation, 88M/6168; Marseilles, Berre lagoon, distribn, of natural, artificial, radioactive isotopes, 88M/4089; Massif Central and Languedoc, relationship between geochem. and textural type in spinel lherzolites, 88M/2742; Massif Central, behaviour of W, Sn, U, Ta, Nb, U in granitic rocks, 88M/3927; geochem. changes during surface weathering of Pliocene basanite, 88M/5029; granulitic xenoliths, petrol., Sr, Nd isotope systematics, model age estimates, 88M/1124; mantle-derived volatiles in continental crust, 88M/5529; petrol., geochem. relationships between pyroxene megacrysts and assoc. alkali basalts, 88M/5554; Tertiary, Quaternary volcanism, 88M/2806; 'Les Malines' mine, sulphide-bearing intrakarstic sediment, 88M/3578; Albigeois, relict clinopyroxene in metabasites, chem. anal., 88M/1236; Chessy, Cu-Zn deposit, min. data, 88M/3579; Massif Central, Échassières, ferberite stockwork, evolution, crystallochem., 88M/4306; granite complex, Rb/Sr isotopic study, 88M/3929; hydrothermal alteration of granite cupola, petrogr. study, 88M/4685; Li-bearing donbassite, tosudite, occurrence, 88M/5016; mica schists, behaviour, geochem. 88M/3935: hydrothermal evolution in relation to magmatic events, fluid inclusion, min. study, 88M/3936; Échassières, Beauvoir granite, cut effect in petrofabric diagrams, application, 88M/1157; evolutionary 88M/3932; model sequence, emplacement, evolution of magmamagmatic fluid system, 88M/3934; U, Th geochem., mineralogy, 88M/3933; rare metal granite, major-, tr. elem. study, 88M/3931; tantalite, columbotantalite, pyrochlore group mins., chem. data, 88M/4305; phase relations at 1 and 3 kbar, 88M/3676; evolution of mica compn., 88M/4269; cassiterite, columbotantalates, interrelations, evolution of, 88M/4289; petrogr., geochem. logs, 88M/4472; structl. geol., 88M/4471; three stages of mica development, 88M/4268; Échassières Massif, Colettes granite, magmatic struct., 88M/4473; Massif Central, Fontmarcel, cordierite diatreme, hydraulic brecciation, 88M/1237; Haut-Allier, carbonatization of ultramafic xenoliths, 88M/1450; Les Borderies, polymetallic vein, min., isotopic evolution, 88M/3889; Limagnes, U formation processes in Tertiary sediments, 88M/2152; Limousin, Saint-Sylvestre, lamprophyres cutting across hyper-

aluminous granite, petrol., origin, 88M/6165; Lévezou, eclogites, evaluation of P-T condns. during metamorphism, 88M/6390; Malines Zn-Pb dist., Triassic marls, lithostratigr., tr. elem. distribn., 88M/3577; Massif de Guéret, granitic rocks, units distinguished by chem. compn. of biotite, 88M/6161; Mont-Dore, Mn mineralization, 88M/0703; Monts du Forez, interaction between Piolard diorite and Julien-la-Vêtre monzogranite, Saint 88M/6164; Najac-Carmaux metapelites, new outcrop of high-P metamorphism, 88M/4710; Neschers. Quaternary pumice, ⁴⁰Ar/³⁹Ar dating, defeat of xenocrystic contamination, 88M/3209; Nord-Forez, field evidence for successive mixing between Piolard diorite and Saint-Julien-la-Vêtre monzogranite, 88M/6162; Rouergue, Alvi-rich amphibole in eclogite, 88M/0992; reaction sites in undeformed metagrabbro, 88M/0702; Rouergue crystalline region, metamorphic series derived through ductile shear deformation of granite, 88M/6391; Ussel dist., galena, fluorite, Pb isotopic, REE anal., 88M/3928; Massif Central, W. Vivarais, migmatites, anatectic leucogranites, formed by partial melting of metagranites, 88M/3056; Maures Massif, ortho-mica schists, tectonic origin, 88M/4709; Montagne Noire, Bournac, polymetallic vein deposit, fluid inclusion study, 88M/0367; Orleans, B.R.G.M. collection, Pb-free wakefieldite-(Ce), second occurrence recognized, 88M/2624; Paris Basin, organic geochem., 88M/5895; Upper Lutetian evaporites, petrol., diagenesis, 88M/0764; Port Cros, polycyclic aromatic hydrocarbons in recent sediments, sources, distribn., 88M/4132; Pyrenees, Gouffre de la Pierre-Saint-Martin, high U content in stalagmites, 88M/4020; W Pyrenees, diagenetic evolution of dolomitic Callovo-Oxfordian series, 88M/6392; Saint-Alyre, orthogneiss, degree of partial melting of, 88M/4711; Saint-Alyre- ès-Montagne, orthogneiss, U/Pb dating, 88M/3210; Savoie, discovery of mariposite clasts in conglomerates, 88M/6115; Savoie, Versoyen, ferroaxinite, occurrence, descriptn., 88M/2554; Savoy, Lake Aiguebelette, interstitial water, sediment chem., 88M/2375; Tarn, Fumade, tungsten deposits, geochem., petrogr., 88M/1907; Noailhac-Saint-Salvy, hydrothermal alteration, Zn mineralization, 88M/0628; Tarn-Aveyron, Saint-Salvide-Carcavès nappe, basic lavas, petrol., 88M/6233; Var, Cap-Garonne, perroudite, new sulphide-halide of Hg, Ag, 88M/4345; Velay, amphibolites, granulite/amphibolite facies transition, 88M/1471; diorite intrusion into granite, resulting microtextures, 88M/2834; Velay dome, orthopyroxene-bearing vaugnerite, petrogr., geochem., min. characteristics, genesis, 88M/6166; Vendée, chem., min. evolution of garnet, muscovite, in vicinity of biotite isograd during prograde metamorphism, 88M/6388; Yeu Is., gneiss, mapping, discovery of hyperaluminous septa of

- staurolite, 88M/1470; Vosges, 'Ligne des Klippes', geodynamic setting, 88M/6283; Vittel, Lower Triassic sandstone, geothermal, hydrochem. anomaly, 88M/2347
- —, CORSICA, NW, Permian calc-alkaline magmatism, genesis, 88M/1238; Monte Cinto group, igneous rocks, K/Ar dating, 88M/1609; Monte San Petrone, recrystallization of eclogites in metabasalts, 88M/1477
- Franckeite, mutual Pb²⁺/Sn²⁺ substitution in sulphosalts, 88M/1055; USA, California, Santa Cruz, Kalkar quarry, occurrence, 88M/3168

Francolite v. apatite

- Franklinfurnaceite, USA, New Jersey, Franklin, new min., 88M/1089
- Freedite, Pb₈Cu(AsO₃)₂O₃Cl₅, crystal struct., 88M/0275
- Freezing, density functional theory, 88M/0461 Freibergite v. tetrahedrite
- Fulgurite, Turkey, 1 zmir-Selçuk-Çamlik village, Mezargediği area, occurrence, 88M/1455
- Fulvic acid, aquatic, molecular weight determined by vapour *P* osmometry, 88M/2447; from particulate matter of water-logged peatland, 88M/5918
- Fumaroles, Italy, Aeolian Is., Vulcano, Br/Cr ratios, 88M/2220; New Zealand, Mt Tongariro, Ketetahi Hot Springs, phys., chem. survey, 88M/6261
- Fumarolic gases, *Italy, Vulcano*, evolution of, boundary condns. set by measured parameters, 88M/6238; *New Zealand, White Is.*, redox processes governing chem. of, 88M/2247; *USA, Hawaii, Kilauea*, variation of δ¹³C in, 88M/2260
- Furongite, Zaïre, Kivu, Kobokobo, second world occurrence, 88M/1074
- Gabbro, MORB, two-phase deparation, fracturing in, 88M/1379; W Alps, Montgenèvre ophiolite, comparative major, tr. elem. geochem., 88M/2211; Australia, New South Wales, The Crescent, fission track dating, 88M/1635; Cyprus, drillhole CY-4, structl., petrol. features, 88M/1382; DSDP, Leg 82, evolution of, influence of fluid phase on metamorphic crystallizations, 88M/1401; France, Aveyron, La Bessenoits, in gneissic massif, 88M/4712; Ernée and Trégomar, layered, petrol., 88M/2831; Iraq, Penjwin complex, layered, REE pattern of, 88M/6289; Italy, Ivrea Zone, Val Sesia, petrogenesis, tr. elem., isotope geochem., 88M/1118; Italy, Sissone Valley, petrol., 88M/2835; Turkey, Baskil, orbicular, origin, 88M/4480; Kirşehir, NE of Kaman region, min., petrogr., geochem., 88M/4483; USA, California, probable low-P intrusion of, into serpentinized peridotite, 88M/1295
- intrusion, Australia, Queensland, Somerset Dam, layered, cyclic units in, 88M/2865
- series, England, Cumbria, Carrock Fell, intrusion of, as sub-horizontal tabular body, 88M/6156
- --- amphibolite transition, volume effect of, 88M/6382

- -- anorthosite massifs, USSR, Ukrainian Shield, petrol., presence of ore, 88M/1265
- Gabbroic rocks, Japan. Kinki dist., Ikomayama Mts., petrol., 88M/2863; USSR, Kola peninsula Precambrian, petrol., 88M/1269
- Gabbronorite, USA, Alaska, Yakobi and Chichagof Is., petrogenesis, 88M/1285
- Gageite, electron-diffraction, electronmicroscopy study, crystal structs., polytypism, fibre texture, 88M/0253 Gahnite v. spinel
- GALAPAGOS ARCHIPELAGO, *Isla Pinta*, volcanic geol., petrol., 88M/0752
- Galena, decorating natural faces of mins. with anthraquinone, 88M/1510; electronic struct., chem. reactivity of surface of, 88M/3497; in contact aureole of andesite stock, 88M/6364; phase relations in systems Ag₂S-Cu₂S-Bi₂S₃, Ag₂S-Cu₂-PbS, 88M/2044; solubility in 1-5 m NaCl solutions to 300°C, 88M/5428; tr. elems. in, geochem. significance in distinguishing genetic types of Pb-Zn ore deposits, 88M/0618; Belgium, from lead-zinc deposits, S isotopic geochem., 88M/3854; Canada, Nova Scotia, Cape Breton Is., Yava deposit, sandstone lithol. in Silver Mine fm., relation to, 88M/1867; Canada, Niagara Escarpment, Pb isotope ratios in rocks and, implications for primary, secondary sulphide deposition, 88M/2330; France, Massif Central, Ussel dist., Pb isotopic, REE anal., 88M/3928; Germany, Ore Mts., Halsbrücke, of F-Ba-Pb assocn., Pb isotopic investigations, 88M/0631; Greece, E. Peloponnesos, Ermioni Cu-bearing pyrite mines, metallogeny in basic rocks of palaeosubduction area, 88M/1914; Greenland, Isua, 'least radiogenic', age of, 88M/4867; Pyrenees, Alta Ribagorza, Cierco deposit, solubility of, 88M/3762; USA, Colorado, Grizzly Bear mine. occurrence, 88M/4835
- mineralization, Poland, Dęblin, in Upper Namurian drill hole profile, 88M/3587
- -- baryte mineralization, Poland, Lower Silesia, Nowa Ruda syncline, 88M/3540
- --- sphalerite-pyrite mineralization, *Pyrenees*,
 Bassegoda Mt., stratiform, occurrence,
 88M/3529
- Gallic acid, aqueous thermal degradation of, 88M/4120
- Gallium, detn. in sediment, coal, fly ash, botanical samples, by graphite furnace AAS using Ni matrix modification, 88M/1688; overview, markets, supplies, occurrence, 88M/2500
- Gallstones, struct., evolution of, 88M/4844 Gamagarite, new occurrence, crystal struct.

refinement, 88M/1037

- Ganophyllite, and [Na + Al]-substituted tobermorite, comparison of cation exchange in, crystal-chem. implications, 88M/5115
- Garnet, and ilmenite, Fe-Mn partitioning between, exptl. calibration, applications, 88M/1997; Ca-Fe-Mg-Al, thermochem. data, evaluation, 88M/1991; calcic, derivation, application of solution model for, 88M/3020; calorimetric study of high-P phase transitions among CdGeO₃ polymorphs, 88M/0551; Cd₃Al₂Si₃O₁₂,

- electronegativity of Cd2+ in, 88M/3451; direct observation of dissociated dislocations in, 88M/3450; end members, BASIC program to recast, 88M/3263; exptl. detn. of cation diffusivities in, 88M/5453, reply, 88M/5454; gem species, history, 88M/5503; metamorphic, crustal cooling rates inferred from homogenization of, 88M/6425; new silicate, Mn₃M₂Si₃O₁₂, high-P synthesis, 88M/0549; pyroxenegarnet transformation in pyrolite model compn., exptl. study, bearing on constitution of mantle, 88M/0449; reaction garnet + clinopyroxene + quartz = 2 orthopyroxene + anorthite, potential geobarometer for granulites, 88M/5456; thermodynamics of MgSiO₃-Al₂O₃ heterovalent solid solutions, 88M/3727; Western Australia, Errabiddy, and kyanite, gedrite, in gneisses, corona textures between, 88M/3105; France, Massif Armoricain, Vendée, chem., min. evolution of, in vicinity of biotite isograd during prograde metamorphism, 88M/6388; India, Orissa, occurrence, 88M/4824; Japan, Hokkaido, Hidaka metamorphic belt, in norite, 88M/4507; Shikoku, Sebadani metagabbro mass, Sambagawa schist, resorption-overgrowth of, in contact aureole, 88M/3103; New Zealand, Taranaki, McKee fm., heavy min. suites of core samples, implications for provenance, diagenesis, 88M/4664; North Sea, detrital, as provenance, correlation indicators in reservoir sandstones, 88M/6316; Norway, Seiland, in pelitic blastomylonitic schists, variations in compn. with declining metamorphic grade, 88M/2545; N Norway, multi-textured, from single growth event, 88M/6379; South Africa, Roberts Victor eclogites, O isotopes in coexisting garnets, clinopyroxenes, phlogopite, implications for petrogenesis, mantle metasomatism, 88M/0804; USA, New Hampshire, Cardigan pluton, magmatic, from Acadian thermal event, 88M/1287; USSR, Kamchatka, in ultramafic volcanic rocks, compn. of, 88M/4244; zoning of, test of type of metamorphic zoning, 88M/1491; SW Pamir, from pegmatites, variations in chem. compn., 88M/6006
- —, almandine, nuclear reaction anal. of H in, 88M/6004
- —, -grossular, synthetic, enthalpy of mixing from high-T solution chem., 88M/0547
- —, –pyrope, enthalpy of mixing from high-T solution chem., 88M/0547
- —, –spessartine crystals, *USA*, *Nevada*, *Garnet Hill*, occurrence, descripn., 88M/2544
- —, andradite, heat capacity, thermodynamic props., 88M/2062; Mexico, Sonora, iridescent, gem notes, 88M/5518
- —, grossular, low-water, neutron-diffraction struct. at 20 K, 88M/0244; Tanzania, Merelani area, fluid inclusions in, 88M/2547
- —, hydrogrossular, NMR data or crystallochem. features of, 88M/3452
- —, kimzeyite, named after Joseph Wood Kimzey, short biogr., 88M/4839

- —, pyrope, nuclear reaction anal. of H in, 88M/6004; India, Andhra Pradesh,
- 88M/6004; India, Andhra Pradesh, Vajrakarur area, in kimberlite and lamproite rocks, 88M/1276; USA, Colorado Plateau, from ultramafic diatremes, genesis of carbonate in, 88M/6219
- —, –grossular, stability at 30 kbar, 88M/0548
- —, spessartine, nuclear reaction anal. of H in, 88M/6004
- -clinopyroxene Fe-Mg geothermometer, reinterpn. of existing exptl. data, 88M/5455
- liquid Fe²⁺—Mg equilibria, implications for beginning of melting in crust and subduction zones, 88M/0550
- --muscovite geothermometry, empirical, Canada, Rocky Mts., Selwyn Range, in low-grade metapelites, 88M/6421

Garnierite v. serpentine

- Gas, and coexisting liquids, *P*-compn. relations for, critical points in system NaCl-H₂O, 88M/2021; at great depths, compn. of, hydrogeol. indices, 88M/5530; dissolved, compn. of, in deep groundwaters and groundwater degassing, 88M/3836; evaporite, C, N isotope compns., 88M/5712; F-, Cl-compounds, mobilization, transport, thermodynamic considerations, 88M/5536; inert, from salt beds, isotope compns., 88M/5711; H₂S, and aqueous solutions, investigation of S isotope fractionation between, 88M/4074; laser Raman microprobe applied to gas phase in fluid inclusions in mins., 88M/2135
- disasters, Cameroon, Lake Nyos, magmatological interpn., 88M/2900
- inclusions, in amber, chem. anal., poss. compn. of ancient air, 88M/5548, 88M/5549
- —, natural v. hydrocarbons
- -, noble, behaviour in silicate liquids, solution, diffusion, bubbles, surface effects, applications to natural samples, 88M/0466; extra-terrestrial, in deep marine sediments, 88M/5729; in formation fluids from deep sedimentary basins, review, 88M/5794; in groundwaters from crystalline rocks, radiogenic, fissiogenic, nucleogenic, in zircons, 88M/5550; Pacific Ocean, Loihi Seamount, in hydrothermal plumes, 88M/5822; W. Pacific, elem., isotopic abundances in deep-sea trenches, Switzerland, as tracers 88M/5834; identifying geothermal components in regions devoid of surface geothermal manifestations, 88M/5813
- —, soil, and air, dependence of ²²²Rn flux on concentrations of, anal. of effects produced by several atmospheric variables, 88M/4003; He in, method of mapping groundwater circulation systems in fractured plutonic rock, 88M/1966

Gasparite v. monazite

Gearksutite, crystallochem. peculiarities, 88M/2657

Gedanite v. amber

Gedrite v. amphibole

Geikielite, Switzerland/Italy, Bergell contact aureole, in marbles, 88M/0973

Gemmology, Brewster-angle refractometer, further development, 88M/3783; cheap dichroscope, 88M/2112; DIY instruments,

- 88M/2111; refractometer, use of distant vision technique on awkward specimens, 88M/3782
- Gems, body colour of, 88M/2106; colour in, caused by dispersed metal ions, 88M/5515; durability, design to display, 88M/2114; exhibitions, collections, (book), 88M/3330; identification, development of computer program, 88M/2113; in sword, descriptn., 88M/3771; internal diffusion, 88M/2110; IR spectroscopy in gem identification, 88M/0589; Nelson's 'FMIR body colour', inappropriate model, 88M/5513; queen 'pearls', history, conch 88M/5521; Sri Lanka, gem-bearing sediments, geol., mineralogy, 88M/2103; USA, Maine, 88M/3781
- Geobarometry, internally consistent dataset with uncertainties, correlations, applications to, 88M/5364
- Geobotanical exploration v. exploration, geobotanical
- Geochemical analysis, methods for, summary, 88M/5942
- barriers, theory, practical applications, 88M/0624
- data, with observations below detection limit, statistical treatment, 88M/2508
- exploration ν . exploration, geochemical
- systems, models of, from mixture theory: diffusion, 88M/0438
- Geochemistry, definitions of concepts of geochem. field, background, noise, 88M/2116
- carbonate, phenomenological aspects of, control effect of, 88M/3979
- —, exploration v. exploration geochemistry
- -, organic, recent advances, 88M/2408
- Geochronology, application of generalized numerical error anal. to, 88M/1664
- Geological databases, use of stochastic models in assessment of, 88M/1667
- materials, mins., fluids, melts, thermodynamic modelling, (book), 88M/3345
- powder samples, atomic analytical spectrometry of, 88M/4952
- structures, mapping of, (book), 88M/3335
 Geophysical data, bias in nonparametric tests for periodicity in, 88M/4859
- Geophysics, high-P, laser techniques in, 88M/0432
- Geotechnical records, lithostratigraphic data derived from, computer anal., 88M/1670
- Geothermal areas, Italy, Tuscany, Mt. Amiata, thermal springs, streams, gas vents, chem. compn., 88M/1302; Japan, Kyushu, Hohi, volcanic rocks, K/Ar dating, palaeomagnetic study, 88M/1630; USSR, Kamchatka, Mutnovskii, deuterium, 18O waters, 88M/0827
- exploration v. exploration, geothermal
- fields, ²³²Th/²²⁸Ra dating of newly formed mins. in, check on min. of known age, implications for fluid-rock interactions, 88M/1613; China, Yunnan province, Tengchong, thermal waters, geochem., 88M/2391; Mexico, Los Azufres, volcanic rocks, geochem., 88M/1364; Nicaragua, Momotombo, hydrothermal quartz crystals from four wells, petrogr. correlations, fluid

- inclusion anal., 88M/2133; *Philippines*, *Puhagan*, microearthquakes, induced seismicity, 88M/1331; *Tibet/China*, fluids in, geochem., 88M/5851; *USA*, *California*, *The Geysers*, As, Sb, B concentrations in steam, steam condensate, 88M/0747
- fluids, field anal. system for detn. of He content in, 88M/3291
- potential, Scotland, 88M/3145
- reservoir, 'hot dry rock', ²²²Rn solution by circulating fluids in, 88M/0488
- systems, Ar geochem. in, 88M/4113; large volcanically hosted, controls on hydrol, of, implications for exploration for epithermal min. deposits, 88M/5184; model of thermo-diffusive mass transport using stability theory formalism, 88M/5796; role of CO2 in, 88M/6230; Canada, British Columbia, Meager Mt., hydrothermal alteration, fluid geochem., 88M/5838; France, Massif Central, Cézallier, geol. contraints, borehole reconnaissance. 88M/4086; Italy, Vulsini Mts. volcanic dist., prospecting by geochem, methods on natural gas, water discharges, 88M/2378; New Zealand, Mt Tongariro, Ketetahi Hot Springs, phys., chem. survey, 88M/6261; USA, New Mexico, Valles caldera, active, Mo mineralization in, 88M/3913
- Geothermobarometers, interpn. problems of *P*, *T* estimations based on mineral and, 88M/1464
- Geothermometers, quartz, Na-K, Na-K-Ca, exptl. investigation, effects of fluid compn., 88M/0501
- Germanates, with chain structs., crystal chem., 88M/5105
- Germanium, continental weathering of, Ge/Si in global river discharge, 88M/2363
- GERMANY, alteration zones around Kupferschiefer-type base mineralization, 88M/2155; industrial mins., rocks, production figures, 88M/5299; orthogneiss, Rb/Sr dating, 88M/3218; Permian carbonaceous fan sequences, petrogr., geochem., palaeogeog., source rock potential, 88M/5919; S, geol. setting, relationship of fluorite-baryte mineralization, with ref. to late Palaeozoic unconformity, 88M/3603; SW, formation of Pb-Zn-F-Ba mineralization, 88M/3536; palingenetic magmatism accompanying Hercynian orogenesis, 88M/4476; NW, Lias δ shales, molecular measurements of maturity for, 88M/5916; Altenberg tin deposits, tetrahedrite, tennantite, occurrence, chem. compn., 88M/2635: Baden-Baden. Rotenfels syncline, Rotliegendes rocks, sedimentol. cycles, min. characterization, 88M/6330; Bavaria, U/Pb dating, Hercynian events, 88M/3217; Bodenmais sulphide deposit, petrogr., geochem. studies on country rock, 88M/3534; Büchig, cassiterite deposit, 88M/5250; Fichtelgebirge, Epprechtstein, newly found mins. from, 88M/4814; Bavaria, Spessart crystalline complex, poss. indicators orthogneisses, geotectonic envt., 88M/4720; NE Bavarian massif, granite pluton, petrogr., geochem., 88M/6175; Bitterfeld, Lower Miocene

amber, descriptn., 88M/0588; Black Forest, Grube Sophia, arsenolamprite, occurrence with Ag, 88M/1582; Triberg granite, Moosengrund drilling, chem. alteration, 88M/5633; Wittichen mining area, mins. from, 88M/1580; recently found mins., 88M/3163; Wittichen, Grube Sophia, silver, historical notes, 88M/1581; W edge of Bohemian Massif, Fe-, Zn-, Cu-, and Pb-bearing ore veins, S isotope partitioning, tr. elem. variations, genesis, 88M/3891; Burgenland, Hannersdorf, metabasites, comparative studies, 88M/0802; area between Düsseldorf, Duisburg, Velbert, Wuppertal, mins. of, mining history, 88M/4809; Eifel, granulite-facies lower crustal xenoliths, geochem., geol. history of lower continental crust, 88M/1123; Eifel region, Kalem, hannebachite, occurrence, 88M/4815; E Eifel volcanic field, Quaternary tephra, 40 Ar/39 Ar laser dating of single grains, 88M/3216; Rothenberg scoria cone, complex strombolian, phreatomagmatic volcanism, 88M/6240; Wehr volcano, compn., melting relationships of andalusite in schist xenolith, 88M/4245; Quaternary, multiphase evolved eruption centre, 88M/6239; Eisenberg, gold and other mins., occurence, 88M/1571; Erzgebirge, metamorphic aureole of granite, of contact metamorphism, 88M/2350; Altenberg tin mine, granite, magmatic evolution, geochem. study, 88M/0715; Fichtelgebirge, Waldstein, mins. from, 88M/3161; Freiberg mining area, history, (book), 88M/0092; Grube Clara, melanterite. römerite, occurrence. 88M/4813; mins. from, 88M/4812; Harz Mts., ore deposits, mins., 88M/4807; vitrinite reflectance, geol. interpn., 88M/6329; Bad Grund Pb-Zn mine, Y-synchysite in hydrothermal carbonate, 88M/2647; Huneberg, mins. from diabase, descripn., 88M/1570; Rammelsberg, hydrothermal aureole beneath Cu-Pb-Zn ore deposit, 88M/6363; mining history, mins., 88M/3159; Harz Mts., St Andreasberg, famous mining dist., (book), 88M/3343; Hesse, Altenmittlau, mins. of, 88M/4808; Reichenbach, mins. at baryte locality, 88M/3162; Lahn-Dill area, Herbornseelbach, Carboniferous submarine volcanism, 88M/4563; Marsberg, Cu deposit, geol., 88M/5249; Mid-European Saxothuringian zone, Sb mineralization, min., geol., geochem., ensialic origin, 88M/3535; Ore Mts., Erzgebirge, regional Clarke values, 88M/2464; Halsbrücke, galena of F-Ba-Pb assocn., Pb isotopic study, 88M/0631; Rammelsberg, Neues Lager, mineralization, 88M/5197; Reichenbach, hentschelite. reichenbachite, new Cu phosphate mins., 88M/1091; Reichenbach/Odenwald, new min. occurrences, 88M/6475; Rheinbreitbach, Gruhe 'Virneberg', corkite crystals, 88M/4810; occurrence, Rheinisches Schiefergebirge, metapelites, intercalated metatuffs, within anchizonal terrain, K/Ar dating, 88M/1617; Rhenish Massif, detrital spinels from alpinotype source rocks in Middle Devonian sediments, 88M/4299;

Ries Crater, chem. record of projectile in graded fall-back sedimentary unit from, 88M/5994; shock-wave deformed feldspar grains from, characterization, 88M/1008; Ruhr area, weathering of clay mins. in waste dumps of coal-bearing strata, 88M/1775; Sangerhäusen basin, bitumen extracts from Cu-shales, tr. elem., structl. study, 88M/5920; Sangerhäuser Mulde, Cu-shale, mineralization, Pb isotopic dating, 88M/0632; Schieder Village, fayalite-rich slags of medieval iron-works, spinifex textures, texture zoning in, 88M/5378; Siegen, Alte Buntekuh, mins. from, 88M/4811; Brachbach, Cu mineralization, 88M/3160; Siegerland, Wissen. hauchecornite, occurrence, 88M/3164; Stockheim Trough, min., geochem. of carbonate mineralization, envtl. anals. of Permian clastic, volcaniclastic sediments, 88M/4023; Ulm, calcite single crystals, crystal groups, occurrence, 88M/4816; Vogtland, gorceixite, occurrence, 88M/4806; Werlau-Wellmicher-Gangzug, assoc. with Pb-Zn-Cu ores, 88M/1569; Westerzgebirge-Vogtland region, Variscan tin deposit-generating geochem., 88M/0716; granites, Württemberg, Nagold, Triassic Middle Muschelkalk, mineralogy of borehole samples, 88M/4648

Gersdorffite, correlation of optical props. with cation ratio, 88M/4315; Scotland, Newton Stewart, Talnotry, in Ni-Cu mineralization, 88M/3571

GHANA, Au deposits, occurrence, 88M/0334; pegmatite field, regional mineralogical-geochem. zoning of, 88M/1254

Gibbsite, mechanisms of crystallization from partially neutralized Al chloride solutions, 88M/4973; *Pacific, Tahiti*, in podzols, 88M/3422

Gilbertite, Germany, Fichtelgebirge, Epprechtstein, occurrence, 88M/4814

Glaciogenic rocks, China, Hubei Province, Shennongjia region, characteristics, 88M/1430

Glaserite v. aphthitalite

Glass, (v. also basalt, trachyte, silicate glass) and melts, crystals, especially in hydrous systems, calorimetric studies, 88M/0478; framework aluminosilicate, high-resolution ²³Na, ²⁷Al, ²⁹Si NMR spectroscopy of, 88M/1784; hydrous silica, cross-polarisation magic angle spinning NMR study, 88M/1785; in system CaO-CaF₂-SiO₂, Raman spectroscopic study of solubility mechanisms of F in, 88M/5391; oxyhalide, in system LiCl-Li2O-TeO2, glass-forming region, struct., 88M/5380; 2PbO.B2O3, used for solution calorimetry, structl. envt. of Al dissolved in, ²⁷Al NMR study, 88M/0273; REE-carbonate, miniclave for expts. up to 4 kbar, 1200°C used to study, 88M/2025; rock, new preparation method of, for bulk anals. with electron probe microanalyser, 88M/3261; surface characterization using variety of techniques, 88M/4920

Glaucochroite *v.* olivine Glauconite *v.* mica

Glaucophane v. amphibole

Gneiss, biotite, measurements of Cs, Sr diffusion in, 88M/5394; reactions with aqueous solutions at 250°C, 88M/5377; Africa, Namaqualand southern metamorphic complex, Achab, poss. basement, 88M/1483; Antarctica, Rauer Is., high-grade, Precambrian geol. relationships in, 88M/3112; Bulgaria, Central Rhodopes, REE in orthites from, 88M/2129; Cameroon, Yaoundé, late Precambrian high-grade, origin, evolution of, 88M/6408; Canada, Ontario, Mukoka-Parry Sound region, interplay between folding, ductile shearing in Proterozoic crust, 88M/3115; Parry Sound, Rb/Sr dating, 88M/1647; England, Cornwall, Lizard complex, Kennack, partial melts produced during ophiolite emplacement, 88M/4705; Finland, Lylyvaara, Archaean migmatitic, structl., U/Pb isotopic study, 88M/0006; France, Brittany, St. Malo massif, migmatitic, behaviour of Rb-Sr whole rock, U-Pb zircon systems during partial melting, 88M/1604; Cézallier, Chassole, hydrothermal alteration, petrogr., fluid inclusions, stable isotope data, 88M/3890; Vendee, Yeu Is., mapping, discovery of hyperaluminous septa of staurolite, 88M/1470; Greenland, Liverpool Land, isotopic age dating, 88M/4871; India, Kerala, cordierite, petrol., fluid inclusions, implications for crustal uplift history, 88M/1494; W Dharwar craton, Th, U contents of, 88M/0806; Japan, Abukuma metamorphic terrain, argillaceous, dumortierite in, 88M/4250; Pakistan, Central Himalaya, petrol., 88M/4738; Scotland, Gruinard Bay, Lewisian grey, REE geochem., 88M/0799; South Africa, Johannesburg-Pretoria granite dome, tonalitic, Archaean, U/Pb dating, 88M/1624; W. Namagualand, pelitic, metamorphic zonation, thermal history, 88M/1485; NW Spitsbergen, garnet-cordierite-sillimanite, metamorphic evolution, 88M/3035; Swaziland, tonalitic, early Archaean, multiple zircon growth within, 88M/3225; USA, Alabama, inner piedmont, felsic, petrol., 88M/4517; Colorado, Fremont County, Wet Mts., flecked, petrol., 88M/6430; New York. Adirondack Mts., pyroxene-bearing quartz syenite, pyroxene exsolution, indicator of high-P igneous crystallization, 88M/6015; USSR, N. Caucasus, petrochem., geol., 88M/1489

augen. Spain, Central System, Somosierra-Guadarrama Sector, Hercynian, δO¹⁸ isotopic relations, sedimentary origin, hybrid character, 88M/0707; USA, Alabama, northern piedmont, Kowaliga, geol. setting, 88M/4520

— domes, Finland, Svecofennides, Mustio, evolution, 88M/1467; Greenland, Rinkian belt, and fold nappes, structl. elems., 88M/6377; USA, Washington, Okanogan, metamorphic core complex, 88M/6428

—, granite, *China*, *Shanghaihuan*, polyphase, Rb/Sr dating, 88M/0032; *India*, *West Bengal*, *Chhotanagpur*, geochronol.,

88M/4901; South Africa, Natal, Ngoye, diff. granite types, descripn., 88M/1258

—, orthogneiss, Canada, British Columbia, Barkerville terrain, granitic, U/Pb dating, 88M/1654; France, Saint-Alyre, degree of partial melting, 88M/4711; Saint-Alyreès-Montagne, U/Pb dating, 88M/3210; Germany, Rb/Sr dating, 88M/3218; Bavaria, Spessart crystalline complex, possindicators of geotectonic envt., 88M/4720; Scotland, Stoer, Scourian complex, petrol, implications for geol. evolution of Lewisian complex, 88M/3052; Spain, Central System, Sierra de Guadarrama, geochronol. study, 88M/1607

—, paragneiss, Czechoslovakia, Nízke Tatry Mts. crystalline complex, simple model of paragneiss and amphibole rock protoliths, 88M/6405; Czechoslovakia, Suchý and Malá Magura Mts., retrograde processes in, 88M/6404

Gobbinsite v. zeolite

Godlevskite, Ni₉S₈, struct., 88M/5150

Goethite, adsorption, desorption of B by, 88M/5419; formation in presence of clay mins. at 25°C, 88M/5358; influence of major ions of sea-water on adsorption of simple organic acids by, 88M/0505; min. inclusions of cacoxenite found to be, 88M/5512; photochem. dissolution in acid/oxalate solution, 88M/2036; poss. goethite-iron(III) carbonate solid solution and detn. of CO₂ partial P in low-T geol. systems, 88M/5565; reaction kinetics of adsorption, desorption of Ni, Zn, Cd by, 88M/5420; Se adsorption by, 88M/3758; synthetic, reductive dissolution in dithionite, 88M/3757; Belgium, synthetic Mnsubstituted, magnetic props., 88M/1538; Cameroon, structl. characteristics of, relationships with kaolinite in laterite, TEM study, 88M/5032; Italy, Sardinia, Olmedo, in bauxite deposits, 88M/1937; Nigeria, Provinz Kaduna, occurrence with blue, yellow sapphires, 88M/0572; Spain Galicia, from diverse envts., characterization, 88M/6058; USA, Kansas, Jumbo mine, in brine, petroleum inclusions, geochem. condns. of ore deposition, 88M/5541

 ooids, England, Bedfordshire, growth mechanism, sandwave transport in Lower Greensand, 88M/4633

Gold, abundances vs. grain size in weathered, unweathered till, 88M/2331; Archaean, relation to granulite formation and redox zoning in crust, 88M/5563; Au min. balance in weathering products of primary 88M/2343; lithogeochem. aureole, comparative marine chem., 88M/0590; concn. in natural waters, 88M/5781; detn. by cyanidation, graphite furnace AAS, 88M/4936: detn. in geol. materials by OES, AAS, 88M/3281; detn. in plant materials, influence of siliceous component in, 88M/3279; distribn. in differentiation products of basic and acid magmas of various ages, 88M/0689; finely divided, mechanism for formation in iron sulphides, 88M/5426; geochem. exploration using INAA, 88M/5921; geochem. prospecting, 88M/4170: gold (III) chloride complexes,

effects of surface charge on adsorption of, on oxides, 88M/0503; hydrothermal, role of immiscible magmatic sulphides in generation of, 88M/1847; in deep-water Mn nodules, 88M/2290; in K-feldspar from intrusive and metasomatic formations, 88M/0606; in lateritic profiles, morphol., geochem. evidence of dissolution, crystallization of, 88M/3853; in sea-floor polymetallic sulphide deposits, 88M/0300; in sulphides, study of chem. state of, Mössbauer spectroscopy, 88M/0614; influence of climate, geomorphol., primary geol. on supergene migration of, 88M/2178; influence of metals, volatiles in hydrothermal solutions on Au transport, fluid-inclusion studies, 88M/2147; lab. evidence on behaviour basic and acid melts, 88M/5371; non-instrumental, qualitative test for free Au in geol. samples, 88M/3280; organically-bound, in surficial materials, extraction of, 88M/1682; radioisotope study of traces of Au in sulphides, magnetite, 88M/0532; topographic mineralogy, 88M/3151; transformation of schistose material in presence of, 88M/0452; transport into epithermal envt., 88M/5562; southern Africa, distribn. in Archaean granitic rocks and supracrustal rocks, comparison, 88M/0311; Mid-Atlantic Ridge, in supergene sulphides, 88M/5569; Belgium, Namur province, Rocroi Massif, in alluvial pan samples from small rivers, 88M/4332; Brazil, Mato Grosso, concentration in in situ laterites, 88M/1900; Canadian Shield, biogeochem., method for exploration, 88M/0917; brine-bearing vugs, key to understanding of secondary gold enrichment processes, evolution of brines, 88M/3824; Canada, Arctic, biogeochem. prospecting, 88M/2478; Scotia, Forest Hill Au dist., dispersal in tills, soils, 88M/2475; Nova Scotia, Goldenville fm., Pb isotope data for Au-bearing veins and host meta-sedimentary rocks, 88M/2182; Ontario, Abitibi greenstone belt, fractionation in komatiites, 88M/0286; Quebec, Abitibi, Dest-Or orebody, distribn., 88M/0867; Rouyn-Noranda, Flavrian batholith, distribn., 88M/3964; Czechoslovakia, Pezinok-Kolársky vrch deposit, distribn. in sulphide and non-ore mins., 88M/3860; Finland, Lapland, Kaarestunturi, in conglomerates, min. data, 88M/0315; France, Hercynian Au-bearing shear zones, 88M/3528; Germany, Reichenbach/ Odenwald, 88M/6475; Eisenberg, and other mins., occurence, 88M/1571; India, Karnataka, Mangalur greenstone belt, -bearing rocks, 88M/3549; SE Ireland, iron formation as bedrock source of, implications for exploration, 88M/3574; Nigeria, Isanlu, geochem. prospecting, 88M/0908; Pacific, Cu, Au and subduction, trans-Pacific 88M/5231; perspective, reconnaissance prospecting for, 88M/5226; Pacific regions, supergene, expected types of, 88M/5234; Poland, Lower Silesia, Złotoryja and Wądroże Wielkie, detrital native, min.-geochem. characterization, 88M/2608; South Africa, extraction from

concentrates by roasting, cyanidation, 88M/5200; Barberton Mountain Land, genesis, exhalite source-bed concept, 88M/3546; Witwatersrand gold fields, condns. during peak metamorphism, 88M/1486; USA, central Appalachia, in Fe-rich rocks of Proterozoic-early Palaeozoic rift setting, 88M/0360; Arizona, crustal heritage of ratio in ores, 88M/3564; USSR, Urals, Berezovskoe deposit, nuggets at deep horizons, compn., struct., morphol., occurrence, 88M/2607; Zambia, Bagweulu block, in sedimentary cover, 88M/0314; Zimbabwe, Archaean, metallogenesis, exploration, 88M/0910; geochem. orientation studies, 88M/0911; Belingwe greenstone belt, in upper greenstones, lithospheric extension models, 88M/0331; Renco mine, controls on deposition, 88M/0373

- deposits, Archaean C reservoirs, relevance

to fluid source for, 88M/3909; Archaean lode, ore deposit models, 88M/0301; geol., geochem., genesis, symposium, (book), 88M/0095; geol., geochem., origin, 88M/0313; micron, anal. of fluid inclusion gases in jasperoid as exploration method for, 88M/2491; natural concentration 88M/0312; processes, summary, 88M/0310; vein-type, mining of, 88M/3512; Australia, Big Bell, Archaean, high-grade metamorphic processes which influence, 88M/4747; Cobar, in deformed turbidites, structl. control, hydrothermal origin, 88M/0354; Queensland, Kidston, brecciation, mineralization, alteration, 88M/5274; nature, origin of ore-forming fluid in, 88M/5273; Western Australia, Kalgoorlie, Golden Mile, Archaean, source requirements, metamorphic replacement model, 88M/2177; Murchison Province, disseminated Archaean, example of pre-metamorphic hydrothermal alteration, 88M/0317; Australian Shield, Archaean, genesis, tectonic control, metamorphic replacement model, 88M/1891; Canada, British Columbia, Bridge River dist., soil, plant geochem. orientation surveys, 88M/2485; Coquihalla Au belt, nature of ore fluids, 88M/2493; Quesnel River, geol., soil geochem., 88M/2483; Manitoba, Flin Flon-Snow Lake belt, prelim. investigation, 88M/1898; Newfoundland, Cape Ray, origin of ore metals, hydrothermal fluids in, 88M/0327; Ontario, Kerr-Addison lode, hydrothermal alteration zoning, 88M/0657; Quebec, Val d'Or, Malartic, Chibougamau, biotite from, geochem., 88M/2577; China, Guizhou, fine-grained, geol. characteristics, genesis, 88M/2171; Heilongjiang province, Dongfenshan, in Precambrian banded iron formations, 88M/0381; Zhejiang province, Shaoxing-Longquan uplift zone, geochem. studies of formation of, 88M/5592; Costa Rica, geol., petrochem., metallogenic characteristics, contribn. to new exploration, 88M/3565; Fiji, Vatukoula, Emperor, epithermal, geol., 88M/5286; France, Haute-Vienne, Saint-Yrieix, and Aude, Salsigne, stratabound, application of TL to exploration of, comparison of quartz TL

props, 88M/0903; Ghana, occurrence, 88M/0334; Japan, Ag/Au ratio of native gold and electrum, geochem. envt. of, 88M/4285; Hishikari, case history, present status of exploration, 88M/5259; New Zealand, Coromandel, relationship of palaeosubduction regime and prospectivity of epithermal field, 88M/3557; Papua New Guinea, Lihir Is., Ladolam, geol., Porgera, exploration, 88M/5270; 88M/5266; Woodlark Is., volcanic-hosted epithermal mineralization, 88M/5207; Scotland, Argyllshire, Kilmelford dist., lithogeochem. exploration for, 88M/4169; South Africa, Witwatersrand, problems with placer model for, 88M/3547; USA, Alaska-Juneau, fluid inclusion constraints on genesis of, 88M/2492; Nevada, Gold deposit, epithermal, 88M/2481; Zimbabwe, Archaean, geol. setting, 88M/0328; Pb isotope investigations, reappraisal, 88M/0330

- exploration, Australia, Tasmania, Beaconsfield, electron spin resonance of auriferous and barren quartz, 88M/4177; Canada, Ontario, Kirkland Lake area, use of near surface materials in, 88M/1868
- lodes, greenstone belt, characteristics, 88M/0319
- mineralization, alteration patterns related to, relation to CO₂/H₂O ratios, 88M/3600; southern Africa, Archaean, and komatiites, 88M/0332; Australia, Queensland, Mt Leyshon, geol., 88M/5275; Australia and Zimbabwe, Archaean, S isotope compns., genesis, 88M/0320; Burma, Kyauk Pahto, at plate boundary, structl. control of, photogeol. case history, 88M/5254; Canada, Beardmore-Tashota area, position in geol. evolution, 88M/1895; Ontario, Heron Bay, Hemlo deposit, pyrite of distinctive isotopic compn., potential tool to identify, 88M/0869; Larder Lake, Cheminis deposit, assoc. with Archaean stratabound sulphides, 88M/1928; Red Lake greenstone belt, geochronol. constraints on timing of, 88M/1650; Quebec, Casa-Berardi Au area, till sampling, case history in orientation, discovery, 88M/0882; Ontario, Beardmore-Geraldton area, structl. considerations, role of iron formation, 88M/1896; Hoyle Pond, free C-, carbonate-bearing alteration zone assoc. with, 88M/0323; Canadian shield, Au distribn., dispersion in glacial till assoc. with, 88M/0883; Czechoslovakia, Bohemian Massif, and granitic rocks, 88M/0337; Fiji, Mt Kasi, breccia formation, relation to, 88M/5287; New Zealand, Southern Alps, in high uplift rate mountain belt, 88M/5224; Nicaragua, El Limón mining dist., caldera-related, 88M/2927; Nigeria, primary, 88M/0335; Pacific, Melanesian outer arc, epithermal, and late Cainozoic magmatism, 88M/5232; New Caledonia, occurrence, 88M/5229; Papua New Guinea, Ambitle Is., epithermal, 88M/5267; D'Entrecasteaux Is., Wapolu, hydrothermal models for, 88M/5262; Portugal, Três geol., geochem. prospecting, 88M/5925; Tanzania, review, 88M/0336; USA, Alaska, Fairbanks mining dist.,

disseminated, and bulk mineable vein type, 88M/5237; Colorado, Cripple Creek dist., mine, textural, geochem. Cresson characteristics, 88M/5293; Zambia, 88M/0326; primary, geol. controls, Zimbabwe, Kadoma dist., Nando and Pinkun mines, Archaean, 88M/0316; Kadoma, Venice group of mines, related to shear zones, 88M/0370; Lennox mine, in Fe formation, importance of contrasting modes of deformation, 88M/0371; Mhangura, Redwing mine, in altered Proterozoic ultramafic dykes, 88M/0372

- mines, evaluation concepts, 88M/5189; Papua New Guinea, Woodlark Is., history, 88M/5264; Zimbabwe, in Archaean granitic rocks, 88M/0329
- ore, carbonaceous, mineralogy, microstructs., 88M/0658; South Africa, development of radiometric sorter for, 88M/1673; Transvaal, Barberton greenstone belt, stratiform, metamorphic features, 88M/0318; USSR, central Aldan deposits, organogenic structs. in, 88M/0348; Wales, Dolgellau Gold Belt, fluid inclusion model for genesis of ores, 88M/1904
- prospecting, Canada, Quebec, Val-d'Or, stratigr., structl. relationships, implications for, 88M/5236
- --- antimony deposits, Australia, New South Wales, Hillgrove, implications of fluid inclusion data on origin of, 88M/5283
- -copper mineralization, Australia, New South Wales, Parkes area, Palaeozoic shoshonitic volcanism assoc. with, 88M/5221; China, Shandong, Jingchang, structl. deformation, hydrothermal mineralization, 88M/0306; Zimbabwe, Mvuma, Athens mine, Archaean, 88M/0324
- — bismuth mineralization, Canada, Yukon, Tombstone Mts, in hedenbergitic skarn, 88M/5291
- ironstone formations, metasomatic features, petrol., 88M/0639
- -- polymetallic deposits, min.-geochem. criteria as search tool, 88M/0895
- -quartz mineralization, Australia, Queensland, Charters Towers goldfield, relationship to granodiorites, mylonites, 88M/5276
- - veins, Western Australia, Kambalda, Hunt Mine, Archaean, fluid access, fluid-wall rock interaction in genesis, 88M/0321; Italy, Val d'Ayas, Brusson, K/Ar dating, evidence of mid-Oligocene hydrothermal activity, 88M/1610
- --silver deposits, Australia, New South Wales, Redrock deposit, Permian submarine epithermal precious metal system, 88M/5277; Canada, British Columbia, Shasta, epithermal, multidisciplinary exploration case history, 88M/2484; China, Zhejiang, Zhilingtou, physico-chem. condns., ore-forming process, 88M/1925; Korea, Cheonan-Cheongyang-Nonsan mining dist., stable isotope, fluid inclusion studies, 88M/3554; Philippines, Surigao del Norte, Siana, geol., ore genesis, 88M/5289
- – mineralization, Czechoslovakia, Banska Stiavnica deposit, Terezia vein,

- 88M/3861; Scotland, Tyndrum, min. data, 88M/5581
- – prospecting, W. Spain, Au-Ag reconnaissance programme of sulphide-bearing quartz veins, 88M/0905
- — veins, Se-rich, estimates of Se, S fugacities, formation T for, 88M/2174; Philippines, Davao del Norte, Masara mine, geol., ore deposits, 88M/5290
- ————copper deposits, *Papua New Guinea*, *E. New Britain*, *Wild Dog*, discovery, exploration, 88M/5268
- -telluride mineralization, Fiji, Emperor, min., geochem. studies, 88M/0650; Zimbabwe, Commoner mine, Archaean, 88M/0325
- Golschite, Germany, Bitterfeld, in amber, 88M/0588
- Gondite, *India, Madhya Pradesh, Balaghat Dist., Ukwa*, from Mn deposit, 88M/4733 Gonnardite v. zeolite
- Gorceixite, Germany, Vogtland, occurrence, 88M/4806
- Gossan, Australia, Queensland, derived from Pb-Zn deposits, min. distribn. of pathfinder elems. in, 88M/5931; Western Australia, Ni sulphide, microtextural evaluation, 88M/0353
- Goyazite, Austria, Katschberg road tunnel, occurrence, 88M/6474; Italy, Giogo di Toirano, phosphate mineralization in Permo-Triassic sequence, 88M/1073
- Graftonite, USA, Colorado, Crystal Mtn. dist., in pegmatites, 88M/4834
- Grandidierite, Canada, SE Ontario, occurrence, 88M/6013; USA, New York, Johnsburg, Adirondack Mts., occurrence, 88M/4832
- Granite, and thermal structs. in lithosphere, 88M/4349; as indicators of U provinces, 88M/5170; development of discrete shear-zones in, stress, strain, changes in deformation mechanisms, 88M/1101; Hercynian, meso-, mega-structs. of, 88M/1247; history of granite problem this century, 88M/4350; magmatic granite assocns., classification of, 88M/1226; Antarctica, W. Dronning Maud Land, Annandagstoppane, geol., geochronol., 88M/4910; Marie Byrd Land, Ford Ranges, geochronol., 88M/4911; South Australia, Umberatana, Tourmaline Hill, fluid inclusion study, implications for hydrothermal activity, wallrock metasomatism, 88M/0810; Austria, Bohemian massif, Moldanubian Rb/Sr dating, zone, 88M/1614; NE Brazil, types, current knowledge, 88M/5678; Canada, Newfoundland, Belleoram pluton, geol., 88M/2867; Ontario, Eye-Dashwa Lakes pluton, relative mobility of U, Th, Ra isotopes in weathered zones, 88M/2271; China, Jiangxi Province, Xihuashan, relation between evolution of, and mineralization of vein-type W deposits, 88M/3903; Tengchong county, Xingqi, petrol., 88M/4503; Yanshan orogeny, mineralized, zircon from two diff. types, typomorphic characteristics, 88M/4242; Egypt, Southeastern Desert, younger, relation to mineralization, 88M/2843;

England, Cornwall, Carnmenellis. hydrothermal alteration by meteoric fluid, 88M/0489; origin of saline groundwaters in. evidence from minor, tr. elems., 88M/3828; St. Austell, Li potential of, 88M/3572; Devon, Dartmoor, calc-silicate mins. from, 88M/6003; N. Pennines, geochem., role in orefield mineralization, 88M/0627; SW England, ammonium distribn. 88M/3922; between Dartmoor and Bodmin Moor, detailed gravity survey, shape of Cornubian granite ridge and new Tertiary basin, 88M/6159; Finland, Nattanen-type complexes, petrol., 88M/2818; France, échassières Massif, Beauvoir granite, evolution of mica compn. in, 88M/4269; evolutionary sequence, 88M/3932; petrogr., geochem. logs, 88M/4472; phase relations at 1 and 3 kbar, 88M/3676; structl. geol., 88M/4471; three stages of mica development in, 88M/4268; U, Th geochem., mineralogy, 88M/3933; Échassières Massif, Colettes, magmatic struct., 88M/4473; Germany, NE Bavarian massif, petrogr., geochem., 88M/6175; Black Forest, Triberg, chem. alteration, 88M/5633; Erzgebirge, metamorphic aureole, effects of contact metamorphism, 88M/2350; Erzgebirge, Altenberg tin mine, magmatic evolution, geochem. study, 88M/0715; Westerzgebirge-Vogtland region, Variscan, tin deposit-generating, geochem., 88M/0716; Himalayas, thermal model for distribn. in space, time, 88M/2855; Iberian Peninsula, and related rocks, Hercynian, geochem., fractionation, 88M/4452; India, Arsikere, magmatism, metamorphism in previously depleted crust, 88M/6191; Bihar mica belt, petrol., mode of emplacement of four granitic plutons in pegmatite dist., 88M/2858; adjoining Kolar schist belt, Patna and Bisanattam granites, structl., geochem. evidence for cogenesis, 88M/0724; Ladakh Himalaya, Nyimaling, Lower Palaeozoic, new Rb/Sr data vs. typol., 88M/6187; Singhbhum batholith complex, structl., geochem. evolution, 88M/1170; Ireland, Connemara, Galway granite, spatial distribu. of K, U, Th. surface heat production in, 88M/2205; Oughterard, age, 88M/3207; Leinster, Blackstairs unit, geochem., 88M/4470; Mourne Mts., revised age for, 88M/0008; Rosslare complex, Carnsore granite, new Rb/Sr, U/Pb ages, bearing on antiquity of Rosslare complex, 88M/3206; Italy, Central Alps, Pizzo Bianco, chem., min. data, 88M/2214; Namibia, Damara orogen, regional, geol., structl. setting, 88M/5175; Norway, Fanafjell nappe, Major Bergen tectonostratigraphic position, Arc, 88M/1230; Peru, Cordillera Blanca batholith, relation of crustal thickening to peraluminosity, 88M/4457; Portugal, Avô pluton, geol., petrol., chem., 88M/1243; crystallization model of Caramulo, Hercynian pluton from variations in Li content, 88M/0708; Vila Real, Fe, Mn, Mg behaviour during differentiation of, 88M/2209; Pyrenees, Lesponne massif, Hercynian, structl. study, 88M/4455;

Scotland, Grampians, Newer Granites, age, origin, 88M/3205; N., central belts of Southern Uplands, boulders conglomerates, provenance, 88M/4881; South Africa, Bushveld complex, Makhutso, age, genetic relationships, 88M/3226; Nebo, implications of new U/Pb zircon age, 88M/4894; Spain, Galicia, Rb/Sr dating, 88M/3213; Sweden, Västra Gråshöjden, Proterozoic, geochem., 88M/3920: Vettasjärvi, crustal reactivation, 88M/2816; Switzerland, Val Ferrata, geochem. anals., 88M/2212; USA, Alabama, context of special volume, 88M/4516; Coosa County, alkali metasomatism, trondhjemite genesis, 88M/4524; geol. setting, petrogr., min. chem., 88M/4523; igneous petrogenesis, tectonic setting, 88M/4525; Farmville, Rb/Sr geochronol., 88M/4531; northern piedmont, Zana, geol. setting, 88M/4520; California, Sierra Nevada, origin, evidence from small scale composite dykes, 88M/1293; Illinois borehole UPH-3, healed microcrack orientations in, relationship to rock's stress history, 88M/1290; North Carolina, central Piedmont, Alleghanian deformation, metamorphism, granite emplacement, 88M/4915; USSR, Kazakhstan, fine-grained, in Permian intrusions, decompression model for origin of, 88M/4501; Salma massif, geochem. characteristics of rocks of near-continental rapakivi-granite zones, 88M/3947; Tien-Shan, Kumyshtag massif, distribn. of U and other microelems. in, 88M/0732; N. Yakutia, Arga-Ynnykh-Khay and Ynnykh-Khay granite intrusions, geol., geochem. features of granite complex formation, 88M/6193

- —, alkaline, anorogenic, O isotopic compn. as clue to origin, problem of crustal O, 88M/2195; ignimbrites, and min. deposits in fault-block mountains, 88M/5166; South Australia, Umberatana region, alkaline-peralkaline, Palaeozoic, role of volatiles in crystallization of, 88M/3954; Canada, Quebec-Labrador, Lac Brisson, peralkaline, 88M/2868; Ireland, Mayo, Doolough granite, peralkaline, displaced, metamorphosed, related to late Proterozoic Labrador and Gardar suites, 88M/1234
- -, aluminous, Czechoslovakia, Strážocvskych mt., high T autometasomatism in, 88M/1453; France, Massif Central, Saint-Sylvestre, hyperaluminous, lamprophyres cutting across, petrol., origin, 88M/6165; Nepal, High Himalaya, Manaslu, peraluminous, H, O isotope variations in, evidence for heterogeneous sedimentary 88M/3948; South Africa, hydrothermally altered Vardenskraal, peraluminous Archaean, as provenance model for Witwatersrand sediments, 88M/1863
- batholiths, USA, California, products of local assimilation, regional-scale crustal contamination, 88M/1294
- --, biotite, *Pyrenees, Bassiès pluton*, petrol., age, 88M/6167

- cupola, France, Massif Central, Échassières, hydrothermal alteration of, petrogr. study, 88M/4685
- gneiss v. gneiss, granite
- —, greisenized, *Portugal*, and metasomatic schist of W-Sn deposits, geochem., 88M/3813
- —, I-and S-type, Australia, Lachlan fold belt, opaque mineralogy, mafic min. chem., 88M/6202
- massif, Sardinia, Tempio, petrogr., geochem., structl. studies, 88M/1163
- —, microgranite, Scotland, Ayrshire, Ailsa Craig, arfvedsonite-aegirine, geol., petrol., geochem., 88M/4468
- —, rapakivi, formation of, 88M/1224; *India*, *Swat*, occurrence, 88M/4499
- —, rare metal, geochem. interpn., 88M/3930; France, Massif Central, Beauvoir, major-, tr. elem. study, 88M/3931; model for emplacement, evolution of magmamagmatic fluid system, 88M/3934
- ---, S-type, China, Guangxi Province, Darongshan, petrol., 88M/4504; W France, in Hercynian belt, continental crust formation seen through Sr, Nd isotope systematics of, 88M/5627
- system, calculated individual effects of P, water content on phase equilibria in, 88M/0480
- —, tin-bearing, SW Africa, precursor magma of Uis pegmatite, 88M/4497; South Africa, Zaaiplaats area, crystallization of, 88M/2845; China, Yunnan, Tengchong, relation to mineralization, 88M/3904; USA, Texas, Franklin Mts., and assoc. Proterozoic volcanic rocks, geochem., Sr, Nd isotopic constraints on origin, 88M/0746
- —, two-mica, USA, Great Basin, late Cretaceous, lithophile-elem. mineralization assoc. with, 88M/0363
- —, uraniferous, *Canada, New Brunswick*, Devonian–Carboniferous, geochem., 88M/5665
- -greenstone terrain, W. Sierra Leone, Kasila Group, Archaean, geol., relations with, 88M/6409
- Granitic complexes, France, Échassières, Rb/Sr isotopic study, 88M/3929; USSR, Turkestan-Alai, orogenic, accessory mins., 88M/1271
- dykes, USA, Alabama, Tallapoosa County, northern piedmont, intrusive chronol., progressive deformation, geochem., strain anal. of xenoliths, 88M/4519
- intrusions, Brazil, Espírito Santo, Santa Angélica pluton, complex concentric, in coastal mobile belt, 88M/6222; China, Fangshan. O, H, C isotope studies, 88M/3950
- magma v. magma, granitic
- melts v. melts, granitic
- plutons, petrogr. criteria for establishing Cu potential in, 88M/5251; Portugal, Avô, K/Ar dating, 88M/0012; Castelo Branco, Zebreira, petrogr., min., chem. data, 88M/1244, structl. study, 88M/1245; USA, Alabama Appalachians, N piedmont, structl. setting, 88M/4518
- rocks, and development of continental crust, 88M/4441; and lamprophyre,

weathering process at contact between, microstructl., min., geochem. study, 88M/5030; effects of factors on rare-elem. and heavy-metal distribus. in, 88M/2199; effects of min., geochem. factors on distribn. of rare and heavy elems. in, 88M/5643; modal anals. by quantitative XRD, 88M/0072; origin of saline groundwaters in, evidence from hydrothermal expts., 88M/3673; relationship between cause, process, source, geol. context, during genesis of, 88M/4447; scheelite skarn, evaluation of roles of magmatic source and process, 88M/2146; xenocrysts in, genetic evidence from, 88M/4443; Antarctica, Victoria Land, implications of chem., isotopic variations to regional crustal struct., 88M/2866; Daniels Range, petrogenesis, 88M/4510; NW Argentina, Palaeozoic epidote-bearing, role tectonism, fractional crystallization in origin of, 88M/4534; Bulgaria, Mo in, mode of occurrence, 88M/0717; S Bulgaria, W, Mo, Sn in, 88M/0633; Burma, tectonic settings for emplacement of, 88M/5202; Canada, Ontario, Atikokan, REE abundances in, 88M/3844; China, Anhui Province, genetic types, related mineralization process, 88M/3553; Jiangxi Province, two types, REE geochem. characteristics, metallogenic significance, 88M/0731; S China, application of partial melting model to study of petrogenesis of, 88M/6194; SE China, Hercynian-Indosinian, distribn., geochem. features, 88M/2861; Czechoslovakia, Bohemian Massif, and Au mineralization, 88M/0337; Čierna hora Mts., petrol., 88M/3938; Strážovské vrchy Mts., Rb/Sr dating, 88M/1619; Finland, Proterozoic, granite types, metallogeny, relation to crustal evolution, 88M/2817; E Finland, Archaean, evolution in compn. controlled by time-dependent changes in petrogenetic processes, 88M/2821; S Finland, synkinematic Svecokarelian, characteristics, geol. setting, 88M/2819; France, Brittany, Huelgoat intrusion, cordierite-bearing, REE partitioning in magmatic cordierite, implications for, 88M/3925; Massif Central, behaviour of W, Sn, U, Ta, Nb, U in, 88M/3927; Massif Central, Massif de Guéret, units distinguished by chem. compn. of biotite, 88M/6161; Greece, Paranesti, Mn-rich biotite from, 88M/1000; India, Andhra Pradesh, Medak area, Archaean, petrogr., major oxide chem., 88M/2856; Goa, Precambrian, geochronol., geochem., 88M/0723; Italy, Elba and Campiglia Marittima, major elem. chem., Cu, Pb, Zn distribn., 88M/2218; Maritime Alps, Nucetto and Barbassiria massifs, petrogenesis, 88M/0710; Sicily, mafic microgranular xenoliths in, petrol., 88M/4475; Nigeria, Oban Massif, petrol., geochem., 88M/4489; Poland, Sudetes Mts., Karkonosze, stochastic model crystallization, 88M/1251; Scotland, Argyll, Etive, geochem., petrol. characteristics, 88M/4467; South Africa, Piet Retief, Archaean, prelim. note, 88M/3087;

pre-Witwatersrand basement, clues to source of U placer mineralization, 88M/5176; Spain, N. Galicia and E. Asturias, classification, 88M/6170; Sweden, Värmland, reddish, isotopic datings, 88M/4878; Turkey, SW Caykara (Rize), border facies of batholith, petrogr., 88M/4487; Inner Anatolian granitic belt, Celebi intrusion, geochem., genetic interpn., 88M/4481; USA, Alabama, overview, 88M/4515; Alabama, N piedmont, F geochem., 88M/4526; geochem. aspects of tin mineralization related to, 88M/4527; U/Pb, Rb/Sr isotopic evidence for age, origin, 88M/4530; N, inner piedmont, O, C isotope distribus., 88M/4529; New Hampshire, Concord-type, observations, controls on occurrence of inherited zircon in, 88M/2276; South Carolina, Liberty Hill pluton, evolution of magmatic AFM min. assemblages in, 88M/2876; USSR, Belomor'ya megablock, ultrametagenic, Rb, Sr behaviour in formation of, 88M/5644; Malyi Caucasus, Kedabekskii geochem. features. Dashkesanskii, 88M/0726; Transbaikal, geochem., use in prospecting, 88M/5645; Zimbabwe, Archaean, Au mines in, 88M/0329

- —, alkali, *Mongolia*, geochem., origin, 88M/2854
- —, I- and S-type, mafic xenoliths from, evidence for variations in deep crustal radioactive heat production, 88M/4773; Antarctica, N. Victoria Land, inferred geotectonic setting, 88M/4458; Australia, Lachlan Fold Belt, contrasting deformation, 88M/6201; Sweden, lithophile elem. distribn., 88M/3921
- stocks, *Portugal*, *Arouca* and *Regoufe*, origin, age, 88M/2210

Granitization problem, review, 88M/4351

Granodiorite, Australia, Barrington Tops mantle-derived, batholith, hypersthene, evolution by crystal-liquid fractionation, 88M/2864; Queensland, Charters Towers goldfield, relationship of gold quartz mineralization to, 88M/5276; Czechoslovakia, Hodruša-Štiavnica intrusive complex, biotite from, significance for ore-content evaluation, 88M/2580; France, Pyrenees, Fourque scheelite deposit, petrogr., geochem., 88M/2833; Greece, Seriphos, two-stage, transient heat and mass transfer model for, and assoc. formation of metasomatic skarn, Fe-ore deposits, 88M/3807; Japan, SW Hokkaido, variation in Ba, Sr, Li, Rb concentrations during chem. weathering, 88M/3951; Kyushu, grain-size dependent variation of Rb content in biotite from, 88M/2132; USA, California, Sierra Nevada, Lamarck, fluid, chem., phys. constraints on mafic-felsic magma interaction in, 88M/4532; Sierra Nevada batholith, vertically zoned, U, Th, REE fractionation in, implications for heat production distribus., 88M/5676

- -- diorite stock, Canada, Ontario, Wawa, Michipicoten greenstone belt, U/Pb dating, 88M/1648
- granite zoned pluton, Scotland, Criffel, oblique diapirism, 88M/1233

— -tonalite pluton, Canada, Quebec, Cape Smith Belt, Rb/Sr dating, 88M/1646

Granophyre xenoliths, alkaline, *Iceland*, *Thorsmörk*, from ignimbrite, min., petrol., 88M/2814

Granulite, and lower continental crust, B abundance, localization in, 88M/2358; constraints on genesis from C isotope compns. of cordierite, graphite, 88M/5746; cordierite-garnet geothermometry in, implications from Fe-Mg mixing in cordierite, 88M/6008; geochem. diagnosis of original rocks in high-grade metamorphic complexes, 88M/2351; in normal and thickened crusts, origin, evolution, 88M/1501; reaction garnet + clinopyroxene + quartz = 2 orthopyroxene + anorthite, potential geobarometer for, 88M/5456; Antarctica, review, 88M/1499; Enderby Land, Fyfe Hills, pyroxene exsolution in, evidence for 1000°C metamorphic T in Archaean continental crust, discussion, 88M/6016, reply, 88M/6017; Canada, Labrador, Wilson Lake, retrogressed, geochronol., 88M/1645; Czechoslovakia, Moldanubian, source material, petrogenesis, 88M/2352; Finland, Proterozoic collisional orogenic belt, petrogenesis, evolution, 88M/3034: grade Lapland, high metamorphism in, 88M/1121; Turku, metamorphic reactions, P-T condns., 88M/3043; France, Massif Central, xenoliths, petrol., Sr, Nd isotope systematics, model age estimates, 88M/1124; India, Madras, Sm-Nd isotopes, REE geochem., 88M/4060; Tamil Nadu, Krianur and Ganguvarpatti, sapphirine-, chem. potential diagrams, chemographic projections, poss. evidence for rapid uplift in S. Indian Shield, 88M/4730; Mali, Iforas, polycyclic two-stage corona growth, 88M/6407; New Zealand, Fiordland, Phanerozoic, Sm-Nd, Rb-Sr isotopic, geochem. systematics, 88M/5757; Norway, Bergen Arc, chronol. of P-T history recorded by, 88M/4873; Jotun-Valdres nappe complex, heterogeneous deformation, mylonitization of, 88M/6380; Scotland, Central Highland division, Proterozoic, stratigr., 88M/4358; Sri Lanka, garnet, thermal, baric evolution of, 88M/6413; Sudan, Sabaloka, Pan-African continental margin, evidence from geochronol. study of, 88M/4889; Tanzania, Wami geochem., 88M/4059; USA, Adirondack Mts., post-metamorphic CO2-rich fluid inclusions in, 88M/1504

- Graphite, constraints on granulite genesis from C isotope compns. of, 88M/5746; crystals in marble, microscale isotopic zoning in, 88M/4063; highly orientated, formation from polyacrylonitrile by using 2D-space between montmorillonite lamellae, 88M/3395; highly oriented pyrolytic, X-ray study of planar defects, 88M/1790; in schist, XRD detn., 88M/4926; recovery from borehole-core samples, 88M/0400; *Sri Lanka*, tr. elems. in, 88M/5561
- deposits, Sri Lanka, consequence of granulite facies metamorphism, 88M/0399

Gravel, ferruginous, *NW Sri Lanka*, chem. origin for, implications for iron ore genesis, 88M/5719

Gravity studies, borehole measurement of Newtonian gravitational constant, 88M/1555; gravity domains and assembly of North American continent by collisional tectonics, 88M/4795; surface deformation, gravity and the geoid from 3-D convection model at low Rayleigh numbers, 88M/1554; variations in gravitation in geol. history, 88M/1556; SW England, between Dartmoor and Bodmin Moor, shape of Cornubian granite ridge and new Tertiary basin, 88M/6159; Italy, Naples, Ischia, of volcanic island, 88M/1546; North Sea, Oslo Graben, gravity high, taphrogenesis, 88M/3150

GREAT BRITAIN, correlation between organic, inorganic thermal maturation indices in Palaeozoic basins, 88M/5013; Se status of sheep indicated by wool Se concn., 88M/1957; Tertiary igneous province, asthenospheric, lower-lithospheric mantle contribns. to continental extensional magmatism, 88M/6152; uraniferous hydrocarbons in Carboniferous-hosted min. deposits, mineralogy, 88M/5913

GREECE, Ni laterites, bauxites, genesis during Jurassic, Cretaceous, relation to ultrabasic parent rocks, 88M/1938; coastal, 14C deformation chronol., 88M/0027; NE, ophiolite sequence, geol., 88M/4613; Andros Is., ardennite, crystal chem., lattice parameters, 88M/4247; Argolis Peninsula, Ermioni area, basic lava series, tr., REE geochem., 88M/2224; Chalkidiki, 3-D crustal, upper mantle struct. beneath, 88M/6463; Cyclades, blueschist belt, tectonic evolution, 88M/3803; crystalline complex, evolution, petrol., isotope geochronol., 88M/3802; geochem., metamorphic events and assoc. metamorphic fluids, 88M/3804; Cyclades, Sifnos, transformation of blueschist to greenschist facies rocks, consequence of fluid infiltration, 88M/6401; Dodecanesos, Patmos, transitional alkaline-sub-alkaline lava series, geochem., 88M/5634; Epidavros ophiolite sequence, Mn ore deposits, genesis, 88M/6060; central Euboea, basaltic rocks, major, tr. elem. geochem., poss. geotectonic implications, 88M/2942; Euboikos Bay, Fe-Cr-Ni deposit, 88M/3583; Evoikos Gulf, gamma-spectroscopy in marine sediments, organisms, from mining waste disposal area, 88M/5325; Gulf of Corinth, Fe-Ti-Cr-Ni deposit, 88M/3582; Hellenides, Paikon series, high-P, low-T metamorphic rocks from island arc, 88M/3076; Iti, ophiolites, geochem. characteristics, 88M/2222; Kilkis province, Serbomacedonian massif, stream, soil geochem. survey in metamorphic rocks, 88M/2465; Laurion, Karnareza, austinite, crystal struct., 88M/5154; Laurium, mins. from, 88M/4823; Macedonia, extensional tectonics since late Miocene, 88M/1164; Guevgueli igneous complex, study of interactions between basaltic magmas and continental crust, 88M/2223; Macedonia, Voras Mts., Almopia, zoned clinopyroxenes

from volcanic rocks, 88M/6018; Naxos, high integrated fluid/rock ratios during metamorphism, evidence from C isotopes of calcite in schists and fluid inclusions, 88M/5750; Othrys ophiolite complex, Agrila fm., komatiite-type ultramafic lava, 88M/1383; Paranesti, Mn-rich biotite from granitic rocks, 88M/1000; Parnon massif, zoned amphiboles from metabasites, geothermo-barometry, 88M/6402; Peloponnesus, Argolis Peninsula, Mesozoic sulphide and metal oxide deposits, ocean ridge origin, tectonic setting, 88M/1883; Katakolo area, sulphate mins. from mud volcano, chem. anals., geochem. behaviour, 88M/1057; E. Peloponnesos, Ermioni Cu-bearing pyrite mines, metallogeny in basic rocks of palaeosubduction area, 88M/1914; Santorini hydrothermal field, As, Sb, Bi in sediments, waters, 88M/5703; Serbo-Macedonian Massif, amphibole chem. as P, T indicator in amphibolites, 88M/2570; Seriphos, two-stage, transient heat and mass transfer model for granodiorite intrusion, and assoc. formation of metasomatic skarn, Fe-ore deposits, 88M/3807; Skiros Is., distribn. of elems. between coexisting phengite and chlorite from low grade rocks, 88M/4264; Xanthi, Rhodope zone, corundum-, zoisite-bearing marbles, fluid phase compn., 88M/4724; crystalline amphibolitized eclogites, min. data, 88M/4725; Zidani, chrysotile asbestos deposit, occurrence, 88M/4726

—, AEGEAN ISLANDS, Cainozoic volcanic rocks, petrogenesis, 88M/0682; Seriphos, Syros, Naxos, excursion guide to field trip, 88M/3805

—, AEGEAN SEA, Cretaceous igneous rocks, geochem., origin, 88M/4614

Greenalite v. serpentine

GREENLAND, evidence for two zones of debris entrainment beneath ice sheet, 88M/0762; evolution of late Archaean lower continental crust, 88M/1119; geochem. mapping, prospecting, review, 88M/0900; ¹⁰Be concentrations, precipitation rates north of 40°N to 45°N, 88M/2120; iridescent orthoamphibole, new gem material, 88M/0583; mantle xenoliths, occurrence, 88M/2733; radioactive Cs from Chernobyl in ice sheet, 88M/0404; E, relay structs. in Lower Permian basementinvolved extension system, 88M/6104; Tertiary alkaline magmatism, review, 88M/2805; central E, min. occurrences, monograph, 88M/2150; S, large Ta, Nb occurrence, 88M/5246; U province, of, 88M/5180; SW. characteristics stratiform stratabound scheelite, Archaean Malene tourmalinites. in supracrustal rocks, 88M/6105; W, late Archaean ages for deposition of clastic sediments belonging to Malene supracrustals, ion probe U-Pb zircon study, mid-Archaean 88M/3199; magmatism, 88M/3031; norite dykes, early magmatism, boninitic Proterozoic 88M/5623; outer Ameralik, deposition of Malene supracrustal rocks on Amîtsoq

basement, 88M/3030; Bontekoe Ø, Tertiary volcanic rocks, petrogr., chem. anals., 88M/2888; Caledonian fold belt, Upper Eleonore Bay group and Cambrian metasediments, Rb/Sr, K/Ar Caledonian ages, 88M/4872; Eleonore Bay group, Proterozoic stratigr., 88M/4371; Disko, Vaigat fm., Tertiary, lithostratigr., 88M/2889; Dye, dating of ice cores, Minoan eruption dated to 1645 BC, 88M/0018; Fiskenæsset, B-bearing kornerupine, re-examination of specimens from type locality, 88M/0985; Færingehavn-Tre Brødre area, late Archaean tectonics, 88M/4697; Gardar province, mid-Proterozoic alkaline magmatism, 88M/2803; Godthåb region, Qârusuk dykes, granitic magmatism, petrol., 88M/2811; Godthåbsfjord, Qugssuk, dating of late Archaean crustal mobilization, 88M/0001; Greenland shelf, Tertiary, low-K tholeiites from exploration wells, 88M/6231; ice cap. characteristics, mass distribn. of extraterrestrial dust from, 88M/0955; Igaliko syenite complex, dykes, petrol., 88M/2813; Ilímaussaq alkaline intrusion, layering in, 88M/1186; progressive crystallization, formation of layering in agpaitic magma, 88M/2804; Isua supracrustal belt, age of 'least radiogenic' galenas, 88M/4867; clastic metasedimentary rocks, petrol., REE geochem., 88M/3032; early Archaean rocks, adjacent gneisses, petrol., 88M/3033; shandite, Ni₃Pb₂S₂, in serpentinized metadunite, 88M/1052; Isua and Malene supracrustal rocks, green barian-chromian muscovite. micas, occurrence, 88M/2582; Isukasia, mins. from gneiss complex, U-Pb isotope systematics, 88M/1598; Ivigtut, acuminite, new Sr-fluoride, 88M/2658; Kangerdlugssuag, Kærven syenite complex, Tertiary, min. chem., geochem., 88M/6149; Kap Washington Volcanics, peralkaline petrol., palaeotectonics volcanicity, 88M/5622; Klokken intrusion, layering, compaction, post-magmatic processes, 88M/1187; sidewall crystallization in, zoned ternary feldspars and coexisting mins., 88M/6147; Krummedal supracrustal sequence, Proterozoic metasediments, stratigr., 88M/4361; Lilloise intrusion, large soft-sediment fold in, 88M/1189; Liverpool Land, gneisses, migmatites, isotopic age dating, 88M/4871; Nagssugtoqidian mobile belt, cryptic 1850 m.y. suture between two Archaean continents, chem., isotopic evidence, 88M/4053; Qagarssuk, Nb, P dispersion in soil overlying carbonatite complex, 88M/0881; Rinkian belt, mantled gneiss antiforms and fold nappes, structl. 88M/6377; Rypeø, Malene metasedimentary rocks, relationship to Amîtsoq gneisses, 88M/2671; Scoresby Sund region, Caledonian fold belt, Archaean U/Pb zircon ages, 88M/4870; Caledonian plutonic rocks, U/Pb, Rb/Sr dating, 88M/4869; Sisimiut area, min. chem., crystallization sequences in kimberlite, lamproite dykes, 88M/2810; Skaergaard intrusion, mineralized fracture systems,

88M/6148; Tugtutôq younger giant dyke complex, gabbroic, syenogabbroic, syenitic cumulates, 88M/1188; Umanak area, anorthositic rocks in reworked Archaean basement, 88M/6378; Victoria Fjord, Archaean age, Proterozoic metamorphic overprinting of crystalline basement, 88M/4866

Greenstone, Western Australia, Kalgoorlie dist., evidence for structl. repetition in, 88M/3108

- belts, Precambrian, genetic relationship between komatiitic and tholeitic basalts in, 88M/2732; Finland, Lapland, stratigraphic, depositional features, 88M/6383
- terrains, Western Australia, E. Pilbara, Archaean, metamorphic history, 40Ar/39Ar dating, 88M/1639
- -gneiss terrain, China, Henan Province, late Archaean, age, tectonic setting, 88M/4902
- Greisen, and skarn compound deposit, mineralization, alteration, 88M/5258; regionally metamorphosed, distinction from metapelitic mica schists, 88M/4721; Czechoslovakia, Bohemian massif, related to molybdenite mineralization, discovery of, 88M/1913; USSR, Kazakhstan, Aksai ore deposit, min.-geochem. characteristics, 88M/0640

Greisenization, review, 88M/4454

Greywacke, and interbedded argillite, use of sorting curves in studying K₂O alteration of, 88M/4005; foliated, anal. of quartz grain dimensions in, 88M/4696; *India, Karnataka State, Ranibennur*, geol., 88M/6336; *Morocco, Casablanca*, Cambrian, tectonometamorphic evolution, 88M/2585

Grischunite, crystal struct., 88M/3507

Grossular v. garnet

Grumantite, NaHSi₂O₅.H₂O, new min., 88M/1090

GUADELOUPE, la Grande Découverte volcano, 3100 and 11 500 yr B.P. eruptions, magma and hydrothermally driven sector collapses, 88M/2929

GUATEMALA, S.-central, Neogene, Quaternary volcanism, timing, sources, 88M/2920; Lake Atitlán region, geol., 88M/2921; caldera, Quaternary silicic pyroclastic deposits, 88M/2922; caldera lake, recent geol. history, 88M/2923; Santa María, bimodal soda-rich calc-alkalic stratovolcano, 88M/2924

GUINEA, NW, Palaeozoic sedimentary rocks, granulometric study, 88M/2988; sedimentary rocks, sedimentol. study, 88M/2987; Gaoual region, Palaeozoic sedimentary rock weathering, 88M/1755; Proterozoic magmatism, 88M/4496; Upper Proterozoic Mali group, kaolinization, bauxitization, quirassization, 88M/1754; Los Is., Rouma Is., steacyite, occurrence, anals., 88M/1003

GULF OF ADEN, *Tajura rift*, sediment diagenesis, biogeochem., 88M/5707

GULF OF MEXICO, distribn. of dibenzothiophenes in sediments, 88M/2455; pre-Mesozoic metamorphic basement, tectonic implications of ⁴⁰Ar/³⁹Ar ages, 88M/4917; *Mississippi Fan*, and intraslope

basin, hydrocarbons in, 88M/0861; Orca basin, S, organic C contents in sediment cores, 88M/0793; sedimentary basin, diagenetic evolution of Cainozoic sandstones, 88M/1443

Gunningite, *Switzerland*, *Valais*, occurrence with zincocopiapite, 88M/2639

GUYANA, continental growth, Archaean– Proterozoic transition, evidence from geochem. of metasedimentary rocks, comment, 88M/5762, comment, 88M/5761, reply, 88M/5763

Gypsum, adsorption of additives at crystal surface, theoretical approach, detn. of interfacial bond energies, 88M/5429, detn. of surface coverage required for growth inhibition, 88M/5430; decorating natural faces of mins. with anthraquinone, 88M/1510; single crystals, shear strength on three cleavage planes, 88M/6445; Belgium, Ginant synclinorium, Yves Gomezée, calcareous, silicious pseudomorphs of, 88M/4642; Canada, Ontario, Atikokan, fracture-filling, assoc. with deep saline 88M/3844; Germany, groundwaters, Württemberg, Nagold, in Triassic Middle Muschelkalk, mineralogy of borehole samples, 88M/4648; Italy, Tuscany, Cetine mine, occurrence in oxidation zone, 88M/1059; Mediterranean, Bannock basin, precipitation, 88M/1420; Pacific Ocean, Tuvalu, Funafuti, occurrence, 88M/6481

— deposits, *Poland, Carpathian foredeep*, Sr, Ba in. 88M/4026

— reserves, *Portugal*, review, 88M/1936 Gyrolite, crystal struct., chem., 88M/5106

HAITI, Cul-de-Sac plain, groundwater, isotopic study, 88M/5875; Dummisseau fm., basalts, geochem., implications for origin of Caribbean Sea crust, 88M/5677

Halides, halite-type alkali, ionic radii, optical susceptibilities in, 88M/5164

Halite, anal. of fluid inclusions in, 88M/3871; slip, recrystallization of halite gouge in exptl. shear zones, 88M/0514; solubilities in vapour-saturated liquids above 445°C, redetn. of phase equilibrium props. in system NaCl–H₂O to 1000°C, 1500 bars, 88M/0500; synthetic anhydrite–halite mylonites, textural evolution, 88M/2047; *S. India, Pranhita–Godavari valley*, Proterozoic coastal sabkha halite pans, 88M/4656

Halloysite v. clay minerals

Halotrichite, Czechoslovakia, Nižná Myšľa, occurrence, anals., 88M/1056; Greece, Peloponnesus, Katakolo area, from mud volcano, chem. anals., geochem. behaviour, 88M/1057; Hungary, Mátra Mts., Recsk, structl. study, 88M/1830

Hannebachite, *Germany*, *Eifel region*, *Kalem*, occurrence, 88M/4815

Haplogranite system, effects of B and H₂O on liquidus phase relations in, at 1 kbar, 88M/3677; phase relations under undersaturated condns., 88M/1993

Harmotome v. zeolite

Harstigite, crystal struct., 88M/5096

Harzburgite, high-T, textural studies of garnet lherzolites, evidence of exsolution origin from, 88M/2768; metasomatized, in kimberlite and alkaline magmas, enriched restites and 'flushed' lherzolites, 88M/3013; phase transformations in, to 26 GPa, implications for dynamical behaviour of subducting slab, 88M/3642; Italy, Sicily, Scordia, xenoliths in Quaternary basanitic lava, 88M/2837; Oman, Semail ophiolite, awaruite occurrence with native iron in, 88M/1017; Pacific Ocean, Tahiti, xenoliths in basaltic lava, first discovery, 88M/2950

— massif, Canada, Quebec, Gaspé Peninsula, Mont Albert region, geol., 88M/3114

Hashemite, Ba(Cr,S)O₄, crystal struct., 88M/1832

Hastingsite v. amphibole

Hauchecornite, Germany, Siegerland, Wissen, occurrence, 88M/3164

Hausmannite, and jacobsite from natural assemblages, genetic reinterpn. of crystallographic intergrowths of, 88M/4296; Mn₃O₄, struct. refinement, reflectance measurements, 88M/1821

Haüyne, fine texture, having modulated struct., 88M/3482

Hawaiite, *Pacific Ocean*, *Marotiri Islets*, petrogr., geochem., 88M/2254

flow, near-surface, topographic correction of, 88M/1552; southern Africa, diversion of heat by Archaean cratons, 88M/4776; peri-Atlantic regions, heat production, crustal struct. in, 88M/6452; NW Atlantic Ocean, Sohm abyssal plain, and depth vs. age for Mesozoic, implications for Bermuda Rise, 88M/1549; Canada, Superior Province, measurements, 88M/3143; Canadian Shield, heat production in Archaean crustal profile. implications for mobilization heat-producing elems., 88M/4774; New Zealand, Bay Plenty of coast, measurements, 88M/4781; South China Sea, central basin, distribn. characteristics, 88M/1551; Tunisia, geothermal gradient map from well data, 88M/4778; USA, N. Michigan and Lake Superior region, regional variations, 88M/4779

Heazlewoodite, Greenland, Isua supracrustal belt, assoc. with shandite, in serpentinized metadunite, 88M/1052

Hedenbergite v. pyroxene

Heideite, thermodynamic parameters, formation condns. for, in meteorites, 88M/5979

Helium, accumulation in groundwater, 88M/2122; in soil gas, method of mapping groundwater circulation systems in fractured plutonic rock, 88M/1966; loss, tectonics, terrestrial heat budget, 88M/2115; production of ³He in terrestrial rocks, 88M/3837; *Peru*, mantle-derived, in hydrothermal ore deposits, 88M/2190; *USA*, *Colorado*, *Denver*, envtl. influences on concns. in soil gases, 88M/4180

 isotopes, ³He, *Japan*, *Takaoka*, tritiogenic, in groundwater, 88M/5824

Helvite, effect of P on struct., 88M/3481

Hematite, formation in presence of clay mins. at 25°C, 88M/5358; morphol. of α-Fe₂O₃,

Hematite (cont.)

Hydrocarbons

- importance of surface relaxation, 88M/5136; phases revealed in Incoloy 800 tubes exposed to water under oxidizing condns., 88M/3684; reductive dissolution in dithionite, 88M/3757; transformation of tr. elem.-substituted maghemite to, 88M/5418; Cameroon, structl. characteristics of, relationships with kaolinite in laterite, TEM study, 88M/5032; Egypt, in apparant phosphatic sediments, 88M/0176
- —, titanohematite, Norwegian Sea, diagenesis of titaniferous mins. in Jurassic sandstones, 88M/6313
- /electrolyte solution interface, kinetics of proton desorption at 88M/3749

Hentschelite v. lazulite group

- Herderite, USA, Maine, Topsham, occurrence, 88M/4830
- Hessite, Scotland, Tyndrum, from Au-Ag vein mineralization, 88M/5581
- Hetaerolite, ZnMn₂O₄, synthesis, stability at 25°C, 88M/0525

Heulandite v. zeolite

- Hexahydrite, USSR, Yakutia, from kimberlites, 88M/4325
- Hibonite, from Murchison meteorite, large heterogeneous ²⁶Mg excesses in, 88M/0954
- High-pressure studies, 88M/3712; simplified use of highP belt-type apparatus, 88M/3715; studies, use of homogeneous metal gaskets for stable generation of 8 GPa in 16 cm³ in MA8 apparatus, 88M/3713
- High-pressure technology, materials development by, 88M/0426
- Hilgardite-4M, *Canada*, *New Brunswick*, from, mineralogy, 88M/2623
- HIMALAYAS, crustal generation of leucogranites, 88M/1277; granites, thermal model for distribn. in space, time, 88M/2855; min. content of grasses, grasslands, tr. elem. distribn. in soil profiles, 88M/0208; modern analogue for Archaean crustal evolution, 88M/4400; Himalayan thrust, structl. belts, 88M/4401; Lesser Himalaya, chronostratigraphic markers in end-Precambrian C isotope record, 88M/0772; Mandi-Darla, volcanic rocks, geochem., petrogenesis, 88M/3949

Hiortdahlite II, crystal struct., 88M/1795

- Holdenite, relation of manganostibite to, 88M/4307
- Hollandite, Ba, structl. anal. of K, Rb, Cs substitution in, 88M/0271; commensurate ordering, domains in, 88M/5144; crystallochem. systematics, 88M/0270; synthetic, X-ray photoelectron spectroscopy for direct identification of Ti valence in, 88M/6057
- Hollingworthite, new type of Pt mineralization, 88M/0285
- HONG KONG, min. watch cases, descrptn., 88M/0585
- Hornblende v. amphibole
- Hornblendite, *Italy*, *Sissone Valley*, petrol., 88M/2835
- Hornfels, cordierite, Czechoslovakia, Slovenske Rudohorie Mts., Rochovce granites, geothermometry, change in min. equilibria during recrystallization of garnet-mica-schist in, 88M/1454

- Howardevansite, El Salvador, Izalco volcano, new fumarolic sublimate, mineralogy, crystal struct., 88M/6091
- Howieite, Japan, Shikoku, Kurosegawa tectonic zone, occurrence, anals., 88M/4261 Human teeth and urinary stones, variations in O isotopic compns, of, 88M/3616
- Human urinary stones, stable isotope investigations, comparison with other body components, 88M/3615
- Humic acid, and kerogen, dicarboxylic acids generated by thermal alteration of, 88M/4163
- substances, aquatic, Al complexation by, under acidic condns., 88M/0845; influence of, on geochem. of I in nearshore and hemipelagic marine sediments, 88M/2418
- Humite, clinohumite, titanian, Switzerland/ Italy, Bergell contact aureole, in marbles, 88M/0973
- —, titanoclinohumite, *India, Tamil Nadu, Salem*, from ultrabasic rocks, 88M/6000
- HUNGARY, and Austria, Upper Triassic peritidal carbonate sequences, comparative statistical anal., 88M/2981; Lower Permian volcanic sequences, geol., tectonic setting, 88M/6241; pyroclastics in Eocene/ Oligocene boundary profiles, mineralogy, petrogr., 88M/1307; Aggtelek-Rudabánya mts., Mesozoic sequences, diagenesis, regional metamorphism, 88M/3082; Buda Mountains, Middle Triassic volcanism, 88M/4565; Danube-Tisza interfluve, crystalline basement, petrogr., 88M/3081; Dinarides and Pannonian mass, metamorphic magmatic, complexes, 88M/2690; Gt Hungarian Plain, detn. of flow regime of Quaternary, Pliocene layers by D, ¹⁸O, ¹⁴C, noble gas measurements, 88M/5866; Gt Hungarian Plain and Transylvanian Central Mountains, attempt to correlate metamorphic formations, 88M/3080; Little Plain, E. Alpine type Palaeozoic basement, regional metamorphism, min. assemblages, crystallinity, -bo, coal rank data, 88M/6406; Mátra Mts., Recsk, halotrichite, structl. study, 88M/1830; Nograd occurrence, transformation of phyllocladanes in brown coal, 88M/2427; Pusztaföldvár metamorphite regional unit, formations of, 88M/3078; Sopron region, genesis of leuchtenbergite-bearing metamorphic rocks, 88M/3083; Tiszántúl, Körös-Berettyó and Álmosd metamorphic formations, 88M/3079; Tokaj Mts., pyroxene dacite, petrogenesis, 88M/1305; Velence Mts., Palaeogene andesite volcanism and assoc. rock alteration, 88M/1306; Velence and Buda Mts., high-, low-P cognate clinopyroxenes from alkali lamprophyres, 88M/4253
- Hutchinsonite, *Peru*, *Quiruvilca*, occurrence with baumhauerite-like mineral, 88M/2632
- Hydrocarbon exploration, sandstone illite cements, significance to, 88M/3396; Canada, Grand Banks, S. Whale Basin, vitrinite reflectance measurements, implications for, 88M/2999
- Hydrocarbons, and tar-asphaltene components in Tataria heavy oils and malthas, property

- clay comparison, 88M/0847; rock epigenesis in petroliferous areas, 88M/2287; in shales, movement of, 88M/4124; Rb/Sr dating of fluid migration in source rocks. 88M/3986; N Atlantic, subtropical, atmospheric transport, input, 88M/1954; Australia, hydrocarbon biomarkers from Ordovician sediments, fossil algae. 88M/2435; Gulf of Mexico, Mississippi Fan intraslope basin, 88M/0861; Mediterranean Sea, Gulf of Fos-sur-mer, Carteau Bay, in water column, 88M/2426; Turkey, Adana Basin, origin of, 88M/4135; United Kingdom, Welsh Borderland, occurrence in Cambrian sandstones, 88M/2424; USA, Washington, Puget Sound, factors affecting pore water hydrocarbon concentrations in sediments, 88M/0416
- alkanes, China, Kelamayi oilfield, identification of bicyclic alkanes from steroid precursors on crude oils, 88M/4144
- —, anthraxolite, *Belgium*, *Visé*, occurrence, new data, 88M/4126
- —, asphalt, XRF anal. of S, tr. elems. in, 88M/3316
- —, bitumen, Canada, Athasbasca, non-crystalline inorganic matter-humic complexes in oil sand, relationship to bitumen recovery, 88M/2442; England, central, hydrous pyrolysis, gas chromatography—mass spectrometry study, 88M/5891; Germany, Sangerhäusen basin, extracts from Cu-shales, tr. elem., structl. study, 88M/5920; New Zealand, Ngawha Springs geothermal region, biomarker study, 88M/2437
- —, bituminous compounds, XRF anal. of S, tr. elems. in, 88M/3316
- —, bituminous rocks, USSR, Azerbaijan, metals in, 88M/0769
- ---, coal v. coal
- —, dinosterane, and other steroidal hydrocarbons of dinoflagellate origin in sediments and petroleum, 88M/4127
- —, kerogen, and humic acid, dicarboxylic acids generated by thermal alteration of, 88M/4163; kerogen-like material, microbial degradation products of submerged plants, 88M/5904; prelim. anal. by mild stepwise oxidation with sodium dichromate in glacial acetic acid, 88M/4164
- —, light, (C₁—C₇), China, Jiangsu Province, Jurong Basin, characteristics, 88M/2433; England, Mendip Hills, and carbonate petrol., relationship between, 88M/4125
- —, methane, abiotic, in rocks, characteristics, 88M/3834; petrogenetic role of, effect on liquidus phase relations and solubility mechanism of reduced C–H volatiles, 88M/0472; Canadian Shield, in crystalline rocks, 88M/3833; USA, California, Great Valley, origin of N-rich natural gases, evidence from He, C, N isotope ratios, 88M/5526; Hawaii, above Loihi submarine summit area, anomalies in sea-water, 88M/2398
- —, methylated aromatic, *Indonesia*, *Mahakam delta*, relation of distribn. pattern to maturity of organic matter in ancient sediments, 88M/4143

- —, naphthenic oils, explaining nature of, 88M/5896
- -, natural gas, and organic matter in metamorphic rocks, relationship between, 88M/2429; origin of, 88M/0853; stability in deep subsurface, thermodynamic calculation of equilibrium compns., 88M/4155; China, Hebei Province, coal-generated, discrimination of, 88M/5911; Zhongyuan-Huabei oil-gas area, coal-type, geochem. characteristics, 88M/2434; Finland, Säviä volcanic schist zone, light, anals., 88M/5901; Mediterranean, SE Coastal Plain, assocn. with water, oil, depicted by atmospheric noble gases, 88M/5905; Pacific Ocean, Middle America Trench and Scripps Submarine Canyon, origin of, implications from comparison of microbial gases, 88M/0864; USA, California, Mono Lake, sources, flux of, 88M/4165
- —, non-aromatic, *E. Pacific Rise*, in hydrothermal system, 88M/2440
- -, oil, crude, methylbiphenyl, ethylbiphenyl, dimethylbiphenyl isomer distribus. in, 88M/4147; crude, prediction of source rock characteristics based on terpane biomarkers in, multivariate statistical approach, 88M/0839; crude, trimethylnaphthalenes in, effects of source, maturity, 88M/5915; discovery of dehydroxytocopherol in crudeoil and source rock, significance, 88M/4118; recent advances in organic petrol., geochem., 88M/2408; S-rich crude, hypersaline lake sediments, S-containing compounds in, geochem. implications, 88M/0851; Brazil, onshore part of Espirito Santo Basin, from wells, geochem. anals, 88M/5899; Israel, Helez Region, origin, implications for exploration in E. Mediterranean, 88M/4138; New Zealand, South Island, W. Coast, biol. marker study, 88M/5908; Oman, origin, 88M/4137; USA, Denver basin, Palaeozoic, geochem. correlation, implications for exploration, 88M/4158; Mid-Continent, USA, organic geochem., 88M/4157; Rozel Point Oil, occurrence, identification of organic S compounds in, 88M/2450
- —, oil tar pitches, XRF anal. of S, tr. elems. in, 88M/3316
- -, petroleum, biodegradation as source of ¹³C-enriched CO₂ in formation of carbonate cement, 88M/3989; catagenesis, compn. of, origin of n-alkanes, isoalkanes in petroleum crudes, 88M/2421; dinosterane and other steroidal hydrocarbons of dinoflagellate origin in, 88M/4127; hydrocarbon compns. and palaeoclimate, 88M/4131; organic geochem., new molecular tools used in, 88M/4130; porphyrin complexes, effects of hydrogen sulphide on, 88M/4141; reservoirs, application of fluid inclusions to migration of oil, diagenesis in, 88M/5791; significance of carbonate ooids in source-rock studies, 88M/1407; use of biol. markers in exploration, 88M/2416; NW Europe, petroleum geol., conference proceedings, (book), 88M/4967; Fiji, Nasilai ni Rewa and Naila, seeps, hydrocarbon anals. by gas chromatogr., 88M/0854; New Zealand, Ngawha Springs

- geothermal region, seepage biomarker study, 88M/2437; North Sea, Brae field area, geochem. effects of primary migration in Kimmeridge source rocks, 88M/5888; South Africa, off Richards Bay, in surface microlayer, sampling, GC-FID, GC/MS anal., 88M/2428; SE Turkey, geochem., 88M/4134; USA, Kansas, Jumbo mine, goethite-bearing inclusions, geochem. condns. of ore deposition, 88M/5541; Ohio, organic geochem. and oil-source correlations in Palaeozoic rocks, 88M/4156; USSR, W. Siberian plate, 8³⁴S study, 88M/2431
- —, -bearing rocks, Egypt, Gulf of Suez area, Cretaceous, diagenesis, significance, 88M/2984
- —, polycyclic aromatic, accumulation in acid sensitive lakes, 88M/3633; in sediments with various thermal condns., geochem., 88M/4166; interstellar, in interplanetary dust particles, meteorites, 88M/0956; qualitative UV spectroscopic method as initial guide to source origins of, 88M/3623; France, Port Cros, in recent sediments, sources, distribn., 88M/4132
- —, reservoirs, stylolitic porosity in carbonates, critical factor for deep hydrocarbon production, 88M/1404
- —, source rocks, new aspects on formation of, 88M/4117; France, Hérault, Lodève, potential and oil alteration in uraniferous basin, 88M/4133
- —, steranes, Antarctica, Victoria Land, Beacon Supergroup, in sandstones, siltstones, 88M/2438
- —, uraniferous, Great Britain, in Carboniferous-hosted min. deposits, mineralogy, 88M/5913
- Hydrogarnet, Ca₃Al₂(O₄H₄)₃, neutron and XRD study, 88M/1822
- Hydrogen, clay-assisted photoproduction of, 88M/1738; equations of state for H₂, H₂O, H₂–H₂O fluid mixtures at *T* above 0·01°C and at high *P*, 88M/5360; multisample conversion of water to, by zinc for stable isotope detn., 88M/4929; *P*–volume–*T* equation of, 88M/5359; Raman spectroscopic study of solubility behaviour of H₂ in system Na₂O–Al₂O₃–SiO₂–H₂, 88M/0447
- compounds, hydrogen sulphide, in 0-5 m NaCl solutions at 25°-95°C, 1 atm., solubility, 88M/5399
- Hydrogeochemistry, analytical, application of spectrophotometric method for boron detn., 88M/0081; use of electrical neutrality equation in calculations on equilibrium compns. of geochem. systems, 88M/2366
- Hydrogeological investigations in superdeep wells, technical, methodological difficulties, 88M/2389
- Hydrogrossular v. garnet
- Hydrometallurgy, iron control in, (book), 88M/0100; mineralogical overview of Fe control in, 88M/0282
- Hydrotalcite-manasseite group, new members of, 88M/4346; new min. varieties, structl.-crystallochem. features, 88M/1066

- Hydrothermal aureole, *Germany, Harz Mts.*, *Rammelsberg*, beneath Cu-Pb-Zn ore deposit, 88M/6363
- boiling, calculations of, fugacity coefficients of H₂, CO₂, CH₄, H₂O and H₂O-CO₂-CH₄ mixtures, application to, 88M/5398
- deposits, submarine, isotopic chronol., 88M/3984; sulphide, oxide, E. Pacific Rise, seamounts near 21 N, 88M/0654; Bolivia, polymetallic, fluid inclusion studies, 88M/3566; Pacific, Galapagos Rift, Cocos/Nazca plate boundary, recent, ore paragenesis, 88M/3561; Teahitia submarine volcano, assoc. with intraplate volcanism, 88M/0651; Peru, mantle-derived He in, 88M/2190
- fluids, solution concentration control on partitioning of heterovalent elems, between mins, and, 88M/2019; Pacific, Endeavour Ridge, radiochem, constraints on crustal residence time, 88M/5531
- mineralization, at slow-spreading centres, Atlantic model, 88M/3524; *Italy, Latium, Tolfa Mts.*, abundance, significance of Co, Ni in sulphides and host rocks from, 88M/3863
- minerals, China, Tengchong geothermal area, distribu., 88M/1456
- mounds, Japan, Okinawa Trough backare basin, active, dive studies, 88M/3905
- ores, methods of studying fluid-inclusion aureoles in prospecting for, 88M/5923
- plumes, T, density, buoyancy fluxes in 'black smokers', criterion for buoyancy reversal, 88M/5770; Pacific, Juan de Fuca Ridge, from two vent fields, characteristics, 88M/5835; Loihi Seamount, noble gases in, 88M/5822; Southern Explorer Ridge, real-time mapping, 88M/2180
- solutions, acidity of, 88M/5347; characteristics of hydrolysis of complex Na₂SnF₆ in, exptl. study, 88M/5446; ore elems. in, 88M/3701; simulating geochem. phenomena related to self-regulation of flow struct. of, 88M/5747; study of S complexes in, 88M/3698; USA, Utah, Bingham, chem., isotopic evolution, 88M/0668
- systems, calculations on chem., isotope equilibria in C-H-O system, application to redox reactions in, 88M/5387; computer program for computing CaCO3 chem, in mineralized and thermal waters, 88M/2365; dynamics of mass transfer in, on T geochem. barrier, 88M/3659; in layered gabbros, granites, comparison, origin of low-18O magmas, 88M/1222; induced by volcanic eruptions, influence of volcanic eruptions on He isotope ratios in, 88M/5651; kinetic theory of O isotopic exchange between mins. and water in, 88M/0484; mid-ocean ridge, integrated chem., stable-isotope model of origin of, 88M/3810; δ^{18} O variations in, isotopeexchange model for fluid passing through rock applied to interpn. of, 88M/3885; oceanic ridge crest, transition metal mobility in, at 350°C-425°C, 88M/3811; seafloor, chem., 88M/3881; Chile, Andes, Calabozos caldera, 88M/1372; Cyprus, Troodos, ore-forming, metal-depleted root

- zones of, 88M/2159; *Italy, Novazza*, diff. types of tourmaline in, 88M/6362; *Sardinia*, application of chem. geothermometers to, 88M/2123; *E Pacific Rise*, non-aromatic hydrocarbons in, 88M/2440; *South Africa*, *Bushveld complex*, field, petrol. evidence, 88M/6365
- -- vents, Mid-Atlantic Ridge, 26 N, distribn., chem. of suspended particles from, 88M/5580; NE Pacific, Gorda Ridge, evidence for high-T hydrothermal venting, 88M/4109
- Hydroxyapatite, Ca, precipitated from aqueous solution, international multimethod anal., 88M/5442; synthetic, prelim. studies, application to bone grafts, 88M/0543
- Hydroxysodalite, synthetic, crystal struct., 88M/0263
- Hydrozincite, Zn₅(OH)₆(CO₃)₂, struct refinement, 88M/0278
- IBERIAN PENINSULA, Hercynian gabbrotonalite-granite-leucogranite suite, geochem., fractionation, 88M/4452; xenoliths, occurrence, 88M/2741; S, Pb-Zn-Ag and Hg metallogenesis, anomalous area defined as source of, 88M/0341
- (ce, dendritic crystals, effect of natural convection on growth velocity, morphol., 88M/5403; freezing rate detn. by isotopic compn. of, 88M/3847; *T* dependence of equilibrium form of, 88M/2031; *Greenland*, 10Be concentrations, precipitation rates, 88M/2120
- sheets, of quietly frozen lakes, orientation textures in, 88M/2032; polar, fabrics in, development, prediction, 88M/6103
- (CELAND, chem. surveillance of volcanoes, 88M/4547; lateral magma flow, caldera collapse, mechanism of large eruptions, 88M/4548; tholeiites, Th, Sr, O isotopic geochem., crustal influence on mantle-derived magmas, 88M/5624; NE, meteoric water–basalt interactions, field study, 88M/2370; Thorsmörk, alkaline granophyric xenoliths from ignimbrite, min., petrol., 88M/2814
- ddingsite, weathering of basalt, formation of, 88M/4274

docrase v. vesuvianite

gneous fluids, thermodynamic modelling, 88M/3666

- geochemistry, spurious trends in Pearce-type ratio variation diagrams, discussion of statistical arguments, 88M/5614
- layering, constitutional zone refining of layered intrusions, 88M/1198; exptl. modelling of interstitial melt convection in cumulus piles, 88M/1204; illustrations of, 88M/1197; origins of, (book), 88M/3340; pattern formation during crystallization, formation of fine-scale layering, 88M/1199; solidification contraction, cumulus processes, origin of, 88M/1201
- petrology, anal. of petrol. hypotheses with Pearce elem. ratios, 88M/6144; (book), 88M/0097; statistics of Pearce elem. diagrams and Chayes closure problem, 88M/6143

- processes, characteristic dimensions, times for dynamic crystallization, 88M/1206
- rocks, Bi in, geochem., 88M/5612; felsic, sillimanite, andalusite produced by base-cation leaching, contact metamorphism of, 88M/1457; intrusion of, phys. aspects, 88M/4449; layered, textural equilibrium in, 88M/1200; petrol. studies, review, 88M/4438; rates of removal of U from, U-leach model, applicability to min. separates, 88M/1971, applicability to whole-rock data, 88M/1970; rock-forming T detn. of melt inclusions in accessory mins. of, new method, 88M/1675; sector-zoned phlogopite in, 88M/0998; Aegean Sea, Cretaceous, geochem., origin, 88M/4614; Canada, Wopmay orogen, Great Bear magmatic zone, 1.9-Ga, tectono-magmatic evolution, 88M/0678; Chile, Altiplano of Antofagasta, upper Cainozoic, geochem. studies, 88M/2282; England, S Pennine orefield, hydrothermally altered, interpn. of discordant whole rock K-Ar data from, models of single-stage concomitant K-Ar exchange, 88M/4882; Ireland, min. localities in Dalradian, 88M/5191; Italy, Calabria, Serre, phys., min., chem. alteration, 88M/5632; North America, E. margin, middle Jurassic-early Cretaceous, geochem., 88M/3963; Pacific Ocean, Tonga and adjacent Lau Basin, from N. termination of Tofua magmatic arc, petrol., 88M/6299; Philippine island arc, Oligocene to Recent, Sr isotopic, tr. elem. variations in, evidence for Recent enrichment in sub-Philippine mantle, 88M/3958; Portugal, rock specimens, data bank, 88M/1246; USA, Arkansas, bibliochrony of, 88M/4432; Center Pond pluton, phase separation, melt evolution in granitic rock genesis, 88M/1288: Montana. Crazy Proterozoic enrichment of subcontinental mantle source of, 88M/0742; Wyoming, Beartooth mts., Archaean, Pb, Sr, Nd compns., implications crust-mantle evolution, 88M/3974; USSR, Komandor Is., Sr isotope distribn.,
- —, acidic, SW Japan, tr.-elem. variations in, 88M/5652
- —, acid-intermediate, problems concerning petrochem. calculations of, solution, 88M/3262
- —, alkaline, (book), 88M/1699; Malawi, Chilwa Province, lithosphere metasomatism and petrogenesis, 88M/4491; North America, Monteregian hills and White Mt., petrol., 88M/2802; USA, Texas, trans-Pecos magmatic province, Tertiary alkaline rocks, geochem., 88M/2278; USSR, Kola Peninsula, E. part of Baltic Shield, petrol., 88M/2807
- Ignimbrite, alkali granites and min. deposits in fault-block mountains, 88M/5166; *Chile, Andes, Atana*, ash-flow, resurgent caldera complex, 88M/1370; *Iceland, Thorsmörk,* alkaline granophyric xenoliths, min., petrol., 88M/2814; *USA, Oregon, Crater Lake Caldera*, erupted during collapse, 6845 yr B.P., 88M/1357

Ikaite pseudomorphs, *Zaïre*, in deep-sea fan, intermediate between calcite and porous calcite, 88M/1063

Illite v. clay minerals

- Ilmenite, and garnet, Fe-Mn partitioning between, exptl. calibration, applications, 88M/1997; calorimetric study of high-P phase transitions among CdGeO3 polymorphs, 88M/0551; ferrian, and coexisting titanomagnetite, Mg/Mn partitioning as test for equilibrium between, 88M/6052; high-P phase transition in MnTiO₃ from ilmenite to LiNbO₃ struct., 88M/5413; minor-elem. distribus. in, electron channelling expts., 88M/1025; recalculation necessary of compn. of ilmenite for minerals, 88M/0065; *India*, Andhra Pradesh, Vajrakarur area, in kimberlite and lamproite rocks, 88M/1276; New Zealand, Taranaki, McKee fm., heavy min, suites of core samples, implications for provenance, diagenesis, 88M/4664; Norwegian Sea, diagenesis of titaniferous mins. in Jurassic sandstones, 88M/6313
- type MgSiO₃, computer simulation of struct., lattice dynamics, thermodynamics, 88M/5100
- Ilvaite, mixed valent iron silicate, synthesis, characterization, 88M/3729; monoclinic, crystal struct., nature of monoclinic–orthorhombic transition at high *P*, 88M/5097; thermophys. props., 88M/5459

Imgreite, ref. XRD powder patterns, 88M/4286 Imogolite v. clay minerals

Incaite, mutual Pb²⁺/Sn²⁺ substitution in sulphosalts, 88M/1055

INDIA, K release, fixation reactions in benchmark soils, relation to mineralogy, 88M/5041; metallogeny, concepts, constraints, prospects, 88M/3551; Proterozoic phosphorites, geochem., 88M/4398; Proterozoic phosphorites, petrol., 88M/4397; study of tr. elems. in lithotypes of coals, 88M/4142; V in coals, 88M/5716; Indian sub-continent, transport, fractionation of Pb in river sediments. 88M/2312; Central Indian ferromanganese nodules, geochem., 88M/2314; E coast, riverine estuaries, clay mineralogy, 88M/5022; off N. part of E. coast, clay min. distribn. in shelf sediments, 88M/3409; E Indian craton, ⁴⁰Ar-³⁹Ar incremental heating study of min. separates, Early Archaean, implications for thermal history, 88M/3230; S, arrested charnockite formation, 88M/1492; S, C isotope compns. of fluid inclusions in charnockites, 88M/5755; S, xenoliths in Proterozoic kimberlites, petrol., geophys. implications, 88M/2750; S India-Sri Lanka high-grade terrain, as poss. deep-crust section, 88M/1122; W coast, phosphorites, radiometric ages, 88M/3229; W coast, inner shelf off Bhatkal, ortho-amphibolites, occurrence, 88M/4729; Andaman ophiolite, unusual compn. from cumulates, 88M/2946; Arsikere granite, magmatism, metamorphism in previously depleted crust, 88M/6191; Chhattisgarh Basin, stratigr., sedimentation, 88M/4391; Deccan Traps, continental flood basalt, new theory of origin, evolution, 88M/4573; flood basalts at Cretaceous/Tertiary boundary, 88M/4574, 88M/4575; W Dharwar craton, gneisses, trondhjemites, Th, U contents of, 88M/0806; Goa, Precambrian granitic rocks, geochronol., geochem., 88M/0723; Holenarasipur schist belt, conglomerates, and nature of pre-Holenarasipur crust of Peninsular India, 88M/6123; Indravati late Proterozoic, Basin, stratigr... sedimentary envt., evolution, 88M/4386; Konkan coast: evaluation of reservoir T, local utilization of geothermal watera, 88M/2904; Kolar goldfield, tr.-elem. distribn. in amphibolite country rocks, 88M/2354; adjoining Kolar schist belt, Patna and Bisanattam granites, structl., geochem. evidence for cogenesis, 88M/0724; Kutch, Matanumad, Deccan Trap basalt, natroalunite in laterite profile, 88M/0195; Madras, granulites, Sm-Nd isotopes, REE geochem., 88M/4060; Malanjkhand and Zawar, base metal geomicrobiol. prospecting, deposits, 88M/5928; Naga Hills, contrasting volcanic suites, bearing on tectonic evolution of ophiolite belt, 88M/1390; Peninsular gneiss complex, regional geothermobarometry in granulite facies terrain, 88M/3097; Pranhita-Godavari valley, Proterozoic coastal sabkha halite pans, 88M/4656; Maleri fm., Triassic caliche-derived peloidal calcirudite/calcarenite, petrol., 88M/6337; Pune, calcretes in alluvial sediments, min., geochem., 88M/1427; Purana Basins, middle to late Proterozoic, (book), 88M/3342; sedimentary rocks, Archaeanearly Proterozoic transition, 88M/4382; Rajmahal-Bengal-Sylhet Traps, widespread early Cretaceous flood basalt volcanism, geochem. data, 88M/2240; Sausar Group, jacobsite bearing assemblages, petrol., 88M/6053; Mg-Mn amphibole-bearing assemblages in Mn silicate rocks, petrol., 88M/2572; Swat, Rapakivi granite Vindhyan occurrence, 88M/4499; supergroup, sedimentary rocks, review, 88M/4385; Western Ghats, Deccan Traps, relationships between crustal contamination and crystallisation in continental flood basalt magmas, 88M/2905

ANDHRA PRADESH, Cuddapah, Vempalle fm., chrysotile mineralization along stylolites Proterozoic carbonate sedimentary rocks, 88M/4396; Cuddapah basin, high velocity intrusive body in upper crust delineated by deep seismic soundings, gravity modelling, 88M/4394; mantle xenoliths in picrite, 88M/2860; phosphorites, occurrence, descriptn., 88M/4399; stratigr., struct., evolution, 88M/4384; Cuddapah dist., Mangampeta, baryte deposit, descriptn., 88M/4395; Cuddapah, Godavari, Vindhyan basins, Purana basins, geophys. constraints on evolution, 88M/4383; Mahaboobnagar dist., Maddur, kimberlitic rocks, new find, 88M/6190; Medak area, Archaean granitic rocks, petrogr., major oxide chem., 88M/2856; Prakasam dist., Elchuru alkaline pluton, petrol., 88M/6189; Vajrakarur area, kimberlite and lamproite rocks, 88M/1276

—, ARUNACHAL PRADESH, Elephant Flat area, coals, petrol., chem., depositional aspects, 88M/4658

- -, BIHAR, mica belt, petrol., mode of emplacement of four granitic plutons in pegmatite dist., 88M/2858; Santhal Parganas, Mathurapur, metagabbros and assoc. basic rocks, petrol., geochem., 88M/2857; Singhbhum, U province, genesis, 88M/5181; characterisation. Singhbhum Cu belt, Mosabani mines, quartz, fluid inclusion studies, 88M/2167; Singhbhum granite batholith complex, structl., geochem. evolution, 88M/1170; Singhbhum-Orissa iron ore craton, tectonic envt., acid magmatism, 88M/2859; West Bokaro coalfield, Parej area, relationship between maceral compn. and carbonization props. of coal seams, 88M/1426
- -, GUJARAT, *Cambay*, silica bead industry, 88M/5502
- —, HIMACHAL PRADESH, Himachal Himalaya, Central Crystalline rocks, geol., tectonic setting, 88M/4735; Chaur Hill, zoned skarns, mineralogy, genesis, 88M/4737; Chaur, Jutogh metapelites, petrol., 88M/4734; Mandi-Pandoh area, basic, metabasic rocks, petrochem., 88M/6188
- —, JAMMU AND KASHMIR, loess profiles, geochem. studies, 88M/4033; Kashmir Himalayas, lakes, clay mineralogy, 88M/5718; Ladakh, Indus ophiolitic mélange, volcanic rocks assoc. with, geochem. study, 88M/2945; Ladakh Himalaya, Nyimaling granite, Lower Palaeozoic, new Rb/Sr data vs. zircon typol., 88M/6187
- -, KARNATAKA, S., rare metal-bearing pegmatites, occurrence, descriptn., Bhima88M/3550; group, Upper Proterozoic, stratigraphic puzzle. 88M/4390; Dharwad dist., Mahalingpur area, occurrence of pillow structs. in schists, 88M/3096; Ranibennur, greywackes, geol., 88M/6336; Gulbarga Mangalur greenstone gold-bearing rocks, 88M/3549; Kaladgi, Badami and Bhima groups, Proterozoic sedimentary carbonates, stable isotope geochem., 88M/2313; Kaladgi-Badami Basin, geol., 88M/4389; S Kanara, Paduvari plateau, laterite-bauxite, mineralogy, 88M/1773; Sandur schist belt, silicified cyanobacteria from Archaean cherts, 88M/0773
- , KERALA, chrysoberyl pegmatites, petrol., geochem., 88M/2238; cordierite gneisses, petrol., fluid inclusions, implications for uplift history, 88M/1494; leptynite-khondalite suite, progressive charnockitization of, evidence for formation of charnockites through decrease in fluid P. comment, 88M/4731, reply, 88M/4732; Fort Cochin to Chellanam, beach sands. textural, min. studies, 88M/4657; Kundara clay mine, clay min. transformation in weathering crust, 88M/1766; Ponmudi, prograde charnockite formation, evidence,

- implications, 88M/1493; *Trivandrum dist.* natural radioactivity distribn. studies 88M/1548
- —, MADHYA PRADESH, Balaghat Dist. Ukwa, gondite from Mn deposit, 88M/4733; Bastar Dist., Abujhmar Basin, geol. history, 88M/4388; Bijawar group, Naurhiya, geochem., envtl. significance of banded garnet amphibole, 88M/0807; Godavara valley, Albaka belt, Pakhal, depositional sedimentary envt., 88M/4392; Pakhal Basin, review, 88M/4387
- —, MAHARASHTRA, Raigarh Dist., Murud— Janjira, xenolith-bearing lamprophyres, geochem., petrol., 88M/1275; Wardha valley, Ghugus coalfield, Lower Gondwana sediments, heavy mins., 88M/1425
- —, MEGHALAYA, W. Garo Hills dist., Maturigiri-Dhurakantagiri, U-Th-Mo mineralization in quartz syenite, 88M/1920
- —, ORISSA, chrysoberyl, occurrence, 88M/4824; Kalahandi Koraput dists., Ampani outlier, sedimentary rocks, geol., 88M/4393; Koira valley, Dengura, Mn ore bodies, rutile in, morpho-chem., 88M/6050; Mayurbhanj basic intrusion, Fe-Ti oxide mins. in, 88M/1022; Pottangi and Panchpatmali bauxite-bearing plateaus, geochem. of weathering sequences, 88M/5717
- —, RAJASTHAN, Delhi supergroup, alkaline magmatism in, 88M/4498; volcanic rocks, structl., stratrigr., chem. characteristics, 88M/6245; Mundwara, multiple intrusive body, clustering as aid to evaluation of mode of genesis of, 88M/4500
- Ganguvarpatti, chem. potential diagrams, chemographic projections, application to sapphirine-granulites, poss. evidence for rapid uplift in S. Indian Shield, 88M/4730; Nilgiri, carbonic inclusions from charnockite massif, 88M/1495; Salem, titanoclinohumite from ultrabasic rocks, 88M/6000
- -, UTTAR PRADESH, Almora dist., tin mineralization, 88M/5201; Garhwall Himalaya, kinematics of transverse lineaments, regional tectonics, Holocene stress field, 88M/2694; Central Crystallines, geothermobarometry, 88M/4736; Main Central Thrust, tectonics, 88M/4402
- quartz-wolframite-sulphide veins, fluid inclusion geochem., 88M/0608; Purulia dist., foid-bearing syenites, sodic schists, petrog., 88M/2695; Chhotanagpur, granite gneiss complex, granitic phases of, 88M/4901
- INDIAN OCEAN, merlinoite in Mn nodules 88M/1015; P in sediments, 88M/0774 surface-water suspensates, geochem. 88M/4104; · Central, ferromanganese classification, inter-elem relationships, 88M/3879; polymetallic nodules and assoc. sediments, mineralogy 88M/0616; W, ²²⁶Ra in, 88M/5820; ²¹⁰Pt in, distribn., disequilibrium, partitioning between dissolved and particulate phases 88M/5821; Funk Seamount, kaersutite bearing xenoliths, megacrysts in volcanic

Indian Ocean (cont.)

rocks, 88M/6292; Central Indian Ridge, basalts, petrol., estimates of magma injections in two-layered reservoir, 88M/6291; SE Indian Ridge, geochem. struct., 88M/5640; segment between 28°, 41 S, mineralogy, major, minor elem. chem., origin of St. Paul Is., 88M/4617; Kerguelen Is., U, Th in alkaline lavas, 88M/0722; Kerguelen Is., Mt. Ross, total vol. of magmatic products evaluated, 88M/6267; Réunion, Grand Brulé area, La Fournaise volcano, borehole, lithostratigr., 88M/1317; Piton de la Fournaise volcano. gravity study of offshore struct., 88M/4576; measurements, 1983-1987, 88M/6244; tropical, penetration of bomb-radiocarbon measured by AMS, 88M/5328

Indium, in laterite process, 88M/0757

INDONESIA, Aceh, Tangse, porphyry Cu-Mo prospect, geol., 88M/0646; Bangka, high-resolution seismic, magnetic exploration for tin deposits, 88M/3555; Belitung, Tebrong area, relationship between Sn mineralization and geochem. anomalies in non-residual overburden, 88M/0877; NW Borneo, postsubduction intrusive rocks, geochem., age data, 88M/5654; Halmahera, Cretaceous-early Tertiary arc, fore-arc, basement rocks, petrol., 88M/4618; Palaeogene-Quaternary geol., initiation of volcanic island arc, 88M/6126; Halmahera, Kau particulate Mn and iron framboids, 88M/5825; W. Java, Gunung Limbung, mineralization, fluid inclusion, geochem. study, 88M/5593; Kalimantan, Meratus Range, Cretaceous, petrol., 88M/4509; Kalimantan, Pamali Breccia, diamondiferous breccia, reassessment, 88M/4426; Krakatau, 1983 tsunami, scenario of, 88M/4577; petrol. evolution, implications for future activity, 88M/2908; Mahakam delta, relation of methylated aromatic hydrocarbon distribn. pattern to maturity of organic matter in ancient sediments, 88M/4143; Merapi volcano, metallic, non-metallic elems. in high T gases, transport, sublimation, volatilization. 88M/2245; Sangihe arc, island arc magma series, spatial patterns in mineralogy, 88M/1393; South Sulawesi, mesoscopic structs. produced by Plio-Pleistocene wrench faulting, 88M/2714; Sumatra, Mangani mine, geol., mineralization, 88M/5255; Sunda arc, volcanic rocks, geochem., isotopic systematics, implications for mantle sources, mantle mixing processes, 88M/2246; Sunda arc, Batu Tara volcano, K-rich alkaline volcanic rocks, geochem., petrogenesis, 88M/5653; Sunda-Banda arc, Quaternary volcanism, geochem., and three-component genesis of island-arc basaltic magma, 88M/0680

Ingersonite, Sweden, Långban, new Ca-Mn antimonate related to pyrochlore, 88M/6092
Intrusive rocks, mafic sheets, crustal contamination in, 88M/5611; Afghanistan, major intrusive stages, typol., age, geodynamic setting, 88M/4459; NW Borneo, postsubduction, prelim. geochem.,

age data, 88M/6197; China, Jiangsu Province. Anjishan, convection. crystallization in, 88M/4502; Panzhihua-Xichang area, layered, magmatic types, genesis, 88M/1280; Greenland, Ilímaussag alkaline intrusion, layering in, 88M/1186; Klokken intrusion, layering, compaction, post-magmatic processes, Lilloise intrusion, large soft-sediment fold in, 88M/1189; Norway, Duke Is. and Skaergaard intrusions, layering, related structs., similarities, differences, origins, 88M/1191; Honningsvåg intrusive suite, organization, internal struct, of cyclic units, implications. 88M/1194; Skaergaard intrusion, rhythmic layering, 88M/1192; USA, Texas, Big Bend National Park, Slickrock Mt., petrogenesis, 88M/4434

- complexes, layered, synergetic model of, 88M/2852
- Iodargyrite, würtzite-type AgI, anharmonic thermal vibrations in, 88M/5165
- Iodine, automatic detn. of I species in natural waters, 88M/4934; diagenesis in non-pelagic deep-sea sediments, 88M/2292; diagenesis in pelagic deep-sea sediments, 88M/2291
- isotopes, ¹²⁹I, in diverse natural samples, tandem-accelerator mass-spectrometry measurements, 88M/5934
- IRAN, Palaeozoic ophiolites, geol., geochem., geodynamic implication, 88M/1388; coastal, 14C deformation chronol., 88M/0027; Deh-Bid-Bawanat, metabasites, geochem., 88M/0805; Sar-Cheshmeh, porphyry Cu deposit, Pb isotope data, 88M/3901
- IRAQ, Penjwin complex, REE pattern of layered gabbro, 88M/6289; Tigris/
 Euphrates delta, estuarine sediments, 88M/6332
- Irarsite, new type of Pt mineralization, 88M/0285
- --hollingworthite solid-solution series, Scotland, Shetland ophiolite complex, occurrence, 88M/2633
- IRELAND, minerals, supplementary list, 88M/4801; red dust fall, November, 1979, SEM study, 88M/4637; tree rings, age corresponds with dates of Santorini and volcanic dust veils, 88M/4884; Central, Lower Carboniferous geol./metallogeny, 88M/0303; SE, iron formation as bedrock source of gold, implications for exploration, 88M/3574; NW, pre-Dalradian rocks, 88M/4366; offshore W., Porcupine Basin, reflection seismic study, 88M/3146; Appin group, Proterozoic stratigr., 88M/4369; group, Proterozoic stratigr., 88M/4368; Gortdrum, genesis, mineralogy, geochem. of U in stratiform Cu deposit, 88M/3573; Leinster coalfield, stratigr. of Namurian rocks, 88M/2968; Leinster granite, Blackstairs unit, geochem., 88M/4470
- —, ANTRIM, *Carrickfergus*, doranite, Mg-rich analcite, 88M/1013
- —, CARLOW, E, deformation zone, regional implications, 88M/3054

—, DONEGAL, fibrolite in contact aureoles, 88M/0976; min. localities in Dalradian and assoc. igneous rocks, 88M/5191

- —, DOWN, Mourne Mts., granites, young Rb/Sr ages, 88M/0009; revised age for granites, 88M/0008; Navan Zn-Pb deposit, carbonate, silicate precursors of sulphide mineralization, 88M/1905; Silvermines Zn-Pb-baryte deposit, genesis, fluid inclusion, stable isotope evidence, 88M/0366; Tipperary, Gortdrum deposit, statistical aspects of assay data, 88M/1906
- —, GALWAY, Connemara, Galway granite, K-feldspar breccia from Mo-Cu stockwork deposit, 88M/6160; spatial distribn. of K, U, Th, surface heat production in, 88M/2205; tr. elem. variation in leucogranites within, 88M/3924; Oughterard granite, age, 88M/3207
- —, KERRY, *Ballybunnion*, chalcomenite, occurrence, 88M/1568
- —, LONGFORD, Longford Down Inlier, Ordovician back-arc basin, 88M/2961
- —, MAYO, Annagh Division gneisses and Termon granite, Precambrian, U-Pb zircon dating, 88M/1603; Doolough granite, displaced, metamorphosed peralkaline granite related to late Proterozoic Labrador and Gardar suites, 88M/1234; Inishkea Division, geochem., probable stratigraphic position, 88M/4054; Maumtrasna fm., Ordovician conglomerates, sandstones, nature, field relations, 88M/4636
- —, MONAGHAN, Monaghan—Castleblayney dist., geol., 88M/2689
- —, SLIGO, *Cill Ala dyke swarm*, phys. parameters, 88M/2830
- —, WEXFORD, Rosslare complex, Carnsore granite, new Rb/Sr, U/Pb ages, bearing on antiquity of Rosslare complex, 88M/3206
- Iridium, phys. props. of Os, Ir, Ru, Pt cubic solid solutions, 88M/4770; S. Pole, atmospheric, as measure of meteoritic component, 88M/2535
- anomaly, *W. Canada*, and palynological floral events at three Cretaceous–Tertiary boundary localities, relationship between, 88M/4046
- Iron, catalytic role of birnessite transformation of, 88M/3389; concentrations in river water, solubility of colloidal ferric hydroxide, relevance to, 88M/5356; effect of, on nature of precipitation products of Al, 88M/0502; ferrous-ferric, reactions, increased solubility of quartz following, 88M/3702; liquid, thermophys. measurements on, 88M/3705; mechanism of body-centered cubic-hexagonal close-packed transition in, 88M/3748; metallic, detn. of, in prereduced iron ores, lab. method No. 26/43, 88M/1676; metallic, subsolidus phase relations in system Zr-Fe-Ti-O in equilibrium with, implications for lunar petrol., 88M/5411; mineralogical overview of Fe control in hydrometallurgical processing, 88M/0282; oxidation state of, in tektite glass, 88M/2536; Australia, Victoria, in brown coal, Mössbauer study, 88M/1432
- compounds, oxides, α-Fe₂O₃, atomistic simulation of defect structs., ion transport

in, 88M/5407; and hydroxides, sorption of Ni by, 88M/5421; ferric oxide gel, hydrous, inorganic anion sorption and interactions with phosphate sorption by, 88M/0134; influence on Co adsorption by soils, 88M/0136; P dependence of Morin T of α-Fe₂O₃ obtained by magnetic permeability measurements to 2 GPa, 88M/0516; poorly-crystalline, transformation during boiling with NaOH to concentrate oxides from soils, 88M/5035; precipitation of Fe₃O₄ in magnetotactic bacteria, 88M/1031; Finland, from lake bottoms, props. of, 88M/0162; in groundwater treatment plants, 88M/1033; sulphides, anal., distribn. in recent anoxic marine sediments, 88M/4311; in anoxic marine sediments, characterization of, 88M/3287; in metasediments, isotopic support for retrogressive pyrrhotite to pyrite reaction, 88M/3991; new method for synthesis, 88M/0530; precipitation, influence of citric, lactic acids, 88M/5425; sulphates, hydrated, spontaneous formation of, on lab. samples of pyrite-, marcasitebearing coal, 88M/2638

- deposits, geochem. mechanism of alkali metasomatism and formation of, 88M/5583;
 Australia,New South Wales, Big Cadia,
 Fe-Cu, tr. elem. distribn., Co:Ni ratios, genesis, 88M/3908;
 China, formation of Hanxing type, in light of alteration mineralogy, 88M/1924;
 Bayan Obo, hydrothermal, metasomatic processes, 88M/0642;
 Turkey, Central Anatolia, Divrigi region, geochem., elem. correlation, 88M/3895
- formations, contact metamorphosed, O buffering by retrograde min. pair, orthopyroxene—olivine, 88M/1448; fluid behaviour, phase relations in system Fe—Mg—Si—C—O—H, application to high grade metamorphism of, 88M/0446; granulite-grade, O isotope variations in, constraints on O diffusion, retrograde isotopic exchange, 88M/5760; Precambrian, REE as indicators of nature of mineralization in, 88M/5584; Namibia, S. margin zone of Damara Orogen, related to mafic volcanism, ensialic rifting, 88M/5199
- —, banded, metamorphic grade, O isotope, petrol. constraints, 88M/4065; microbanded, Precambrian, depositional model, 88M/2148; Precambrian, Nd isotopic variations in, 88M/5839; Australia, Pilbara, iron ore classification, 88M/5223; S. China, late Precambrian, stratigr., type, formation condns., 88M/5203; Nigeria, Kwara State, Itakpe area, genesis, 88M/3544; South Africa, Hamersley and Michipicoten, Nd isotopic study, source of REE, Fe in Archaean oceans, 88M/4066
- framboids, *Indonesia*, *Halmahera*, *Kau Bay*, occurrence, 88M/5825
- ions, Fe³⁺, in Al sites in mins., local relaxations around, 88M/5082
- ore, anhydrite from, REE in, 88M/0620; Romania, Transylvanian Basin, Eocene, characteristics, 88M/5198; NW Sri Lanka, chem. origin for basal ferruginous gravels, implications for iron ore genesis, 88M/5719

— mines, USA, Pennsylvania, Danville– Bloomsburg area, Clinton, geol., history, present-day envtl. effects, 88M/0420

- Ironstone, Antarctica, Enderby Land, Napier complex, pyroxene-bearing meta-, 88M/1500; E European platform, siliceous, of Precambrian formations, 88M/3894; NE Scotland, –gossan discrimination, geochem. approach, 88M/4168
- deposition, N. Wales, Ordovician, age, controls, 88M/1143
- deposits, Algeria, Central Sahara, cratonic, oolitic, metallogenesis, 88M/3543
- Irrigation, arid zone, evaporative enrichment of deuterium, ¹⁸O in, 88M/5860
- Island arcs, intraoceanic arc-backarc systems, boninitic and low-Ti subduction-related lavas from, petrogenesis, tectonic setting, 88M/6300; E Asia, metallogeny of deep zones in, 88M/5187; Indonesia, Halmahera, Palaeogene-Quaternary geol., 88M/6126; Pacific Ocean, Mariana Arc, Guam, temporal variation of isotope, REE abundances in volcanic rocks, implications for evolution of, 88M/5660; SW Pacific, development, 88M/6295; tectonic Philippines, recent enrichment events in sources of magmas, Sr, Nd isotopic evidence, 88M/5663; Luzon Is., recent enrichment in source region of arc magmas, Sr, Nd isotopic evidence, 88M/5662; Western Central Luzon arc, recognition of contrasting magmatic processes using SB-systematics, 88M/5661; USA, California, Copley-Balaklala series, geochem., deep layers of Palaeozoic arc, 88M/3975

Isoprenoids, acyclic, as biol. markers, 88M/2410

Isotope effects, non-linear, during elem. migration, 88M/5535

- geodynamics, 88M/3784
- geoscience, nonparametric estimation of averages, errors for small data-sets in, 88M/3840
- Isotopes, radioactive, *Belgium, R. Meuse*, detected in, May 1986, from Chernobyl fallout, 88M/5320
- —, radiogenic, Canada, British Columbia, Bluebell Pb-Zn deposit, detn. in fluid inclusion waters, 88M/5537
- —, stable, transport of, development of kinetic continuum theory for, 88M/5345
- ISRAEL, Cu mineralization in sedimentary cover assoc. with tectonic elems... volcanism, 88M/3548; Mousterian 'Proto-Cro-Magnon' remains, TL dating, origin of modern man, 88M/3227; U distribn. in iron veins, 88M/2138; S, age of latest Precambrian volcanism, re-evaluation, 88M/0028; N Galilee Basin, petrol., clay mins. minerals, 88M/5025; Helez Region, origin of oils, implications for exploration in E. Mediterranean, 88M/4138; Hula Basin, S diagenesis in freshwater lignites, implication for S-C relationships in organic sediments, 88M/4136; Mishash fm., Cretaceous, multi-phase O isotopic anal, as tracer of diagenesis, 88M/3987; Negev Desert, origin of nitrates, 88M/2310; N Negev, and Judean Desert, secondary U

mins., occurrence, 88M/2649; *Timna Basin*, genesis of U in Mn and phosphorite assemblages, 88M/0634; Precambriant magmatic rocks, evolution, 88M/1264

magmatic rocks, evolution, 88M/1264 ITALY, cyrilovite, struct., crystal chem., quiescent volcanism, 88M/1837; surveillance, precursors of new activity, 88M/4551; volcanoes, automatic! reconstruction of surge deposit thicknesses, applications, 88M/1301; xenoliths, occurrences, comparison with Alpine peridotites, 88M/2743; Adige River estuary in nearshore sediments N. Adriatic,; distribn., behaviour of ¹³⁷Cs in nearshore sediments, 88M/3635; æolian Archipelago, Salina Is., evidences of surges overtopping topographic barrier, 88M/2896; Alban Hills, nepheline-kalsilite microperthite in ejecta. 88M/2602; Colle Cimino, baddeleyite in ejected block, 88M/4291; Albanides, geochem. of volcanic rocks from, 88M/2941; Mt. Amiata geothermal region, thermal springs, streams, gas vents, chem. compn., 88M/1302; Antrona maficultramafic complex, ferrogabbroic and basaltic meta-eclogites, petrol., 88M/3070; Aoste, ferroaxinite, occurrence, descriptn., 88M/2554; N. Apennines, External Ligurids, Mt. Aiona ultramafics, basaltic dykes, petrol., 88M/6285; Apuan Alps, Buca della Vena, Ba-Fe-pyrite deposit, mineralogy, 88M/1912; Baveno- Mottarone pluton, granitic facies, characterization by typologic study of zircon populations, 88M/2832; Bergell contact aureole, clinohumite, geikielite, in marbles, 88M/0973; Bologna, Marzabotto, pelitic sedimentary rocks, detailed study, 88M/0167; Bracco ophiolites, Jurassic-Cretaceous palaeogeographic reconstruction, 88M/4611; Calabria, model of velocity struct. beneath, based on lab. data, 88M/6462; Serre, igneous rocks, phys., min., chem. alteration, 88M/5632; Calabria-Peloritani, high-grade metamorphic complex, peraluminous leucocratic rocks, 88M/4056; Campi Flegrei, Monte Nuovo, 1538 eruption, 88M/1303; Carrara Marble, mins. of, 88M/3155; Central Alps, Pizzo Bianco granite, chem., min. data, 88M/2214; Coli, lizardite-1T, lizardite-2H1, crystal structs., 88M/1803; Cottian Alps, Monviso, Cr-rich Mg-chloritoid, first record in high-P metagabbros, 88M/0979; Piemonte ophiolite парре, ovardite occurrences in, significance for process of ovarditization, 88M/2940; Elba and Campiglia Marittima, granitic rocks, major elem. chem., Cu, Pb, Zn distribn., 88M/2218; Finero, retrograde trend in metagabbros, 88M/3069; Genoa, Molinello mine, tangeite, marsturite, occurrence, 88M/3158; Giogo di Toirano, phosphate mineralization in Permo-Triassic sequence, 88M/1073; Gubbio, astronomically controlled cycles in lower Tertiary, 88M/2976; Ir variation as constraint on duration, nature of Cretaceous/Tertiary boundary events, 88M/5701; 'Red Scaglia' limestone, geol. significance of tr.-elem. abundances, 88M/5700; Ischia Di Castro,

Fosso della Scatola, alteration in argillaceous formations, 88M/0168; Ivrea zone, magnetic petrol. of deep crustal rocks, 88M/6458; Ivrea zone, Nd, Sr isotopic study, 88M/2216; Val Sesia, layered gabbros, ultramafic rocks, petrogenesis, tr. elem., isotope geochem., 88M/1118; NE Ivrea and Ceneri zones, Pb isotope study, evidence for contaminated mantle, 88M/2215; Ivrea-Verbano sulphide deposits, Pt-group and related mins., 88M/2629; Latium, mins. from, 88M/1576. 88M/4819; Latium, Sabatini volcanic dist., SH2 deep well, contact metasomatic and hydrothermal mins., 88M/1452; Latium, Tolfa Mts., abundance, significance of Co, Ni in sulphides and host rocks from hydrothermal mineralization, 88M/3863; abundance, significance of Cu, Mn, Zn in sulphide mins. and host rocks from hydrothermal mineralization, 88M/2154; application of O isotope anal, of country rocks to evaluate ore potential, 88M/0906; Ligurian Alps, Voltri Massif, eclogites, new micro-textural, min. chem. data on retrograde post-eclogitic assemblages, 88M/6399; Lipari, rhyolites contaminated with metapelite, gabbro, origin, 88M/6174; Lipari and Stromboli, He in soil-gas, 88M/4561; Maritime Alps, Briançonnais, danburite-bearing mineralizations in Permian metapelites, 88M/0986; Nucetto and Barbassiria massifs, granitic rocks, petrogenesis, 88M/0710; Molise region, springs in carbonate structs., geochem. survey, 88M/0824; Mt. Somma-Vesuvio, panunzite, new min., 88M/6094; Mt. Terminillo, soil genesis, evolution, tr. elem. dynamics, 88M/1759; Naples, Ischia, gravity, magnetic studies of volcanic island, 88M/1546; Porto di Bagnoli, heavy metal pollution study in bottom sediments, 88M/0409; Novara, Antigorio nappe, structl. anal., 88M/3075; Beura, Maddalena quarry, allanite, monazite, xenotime, occurrence, 88M/1577; Novazza, diff. types of tourmaline in hydrothermal system, 88M/6362; Novazza and Val Vedello, U mineralization , 88M/2217; Ortiglieto, Marciazza, Cu-pyrite mineralizations, min. assocn., 88M/1882; Ossola, Val Vigesso, 88M/1575; occurrence, roggianite, Phlegrean Fields, tr. elem. evolution, fractional crystallization, selective enrichment, 88M/5630; Pitigliano, U-rich ekanite, occurrence, 88M/2589; Pozzuoli Solfatara, fluids, isotopic, geochem. study, origin, T at depth, 88M/2219; Puglia, Terra d'Otranto, clay deposits, min., chem., grain-size features, 88M/0169; Rometta-S. Pier Niceto, migmatitic complex, paragneissleucosome assocn., 88M/4717; Sabbie di Monte Marano, Pleistocene sediments, petrol., 88M/2975; Sesia-Lanzo zone, Monte Mucrone, eclogites, Alpine cooling history, fission track evidence, 88M/1611; Simplon fault zone, atypical textures in quartz veins, 88M/4716; quartz textures, 88M/1160; Sissone Valley, hornblendite, gabbros, petrol., 88M/2835; Southern Alps, Brixen quartzphyllite, K/Ar, 40Ar/39Ar study,

evidence for Ar loss at low T, 88M/0015; Stromboli, mantle mixing, contamination as origin of high-Sr radiogenic magmatism, 88M/5631; seismic monitoring of volcanoes, 88M/4560; Tuscany, Apuane Alps, Pollone and Monte Arsiccio deposits, S isotopic studies. 88M/3862; Buca della Vena mine, mins, of, 88M/3156; Cetine mine, cetineite, new Sb-oxide-sulphide min., 88M/1086; elpasolite, struct. refinement, 88M/1842; jurbanite, rostite, occurrence in oxidation zone, 88M/1059; rare sulphate mins., 88M/1099; Tuscany, Niccioleta, pyrite ores, alternative interpn., comments, 88M/1861, reply, 88M/1862; Val d'Ayas, Brusson, gold-quartz veins, K/Ar dating, evidence of mid-Oligocene hydrothermal activity, 88M/1610; Valtellina, Mello, Insubric Line, structl., isotopic age profile across, 88M/1612; Vesuvius, F, Cl distribn. in products of major Plinian eruptions, 88M/0712; Vetto-Carpineti syncline, diagenetic evolution of stratigraphic series, 88M/1760; Vicenza, xonotlite, occurrence, 88M/1578; Viterbo, Orte, Plio-Pleistocene clay-sand suite, geochem., 88M/0766; Vulcano, evolution of fumarolic gases, boundary condns, set by measured parameters, 88M/6238; fumaroles, Br/Cr ratios, 88M/2220; seismic monitoring of volcanoes, 88M/4559; Vulsini Mts. volcanic dist., geothermal prospecting by geochem. methods on natural gas, water discharges, 88M/2378; Western Alps, coexisting amphiboles in eclogite, constraints on miscibility gap between sodic, calcic amphiboles, 88M/6023; W Alps collisional belt, Valle dell'Orco traverse, high-P metamorphism in nappes, 88M/1475; Insubric Line, preferred lattice orientations of plagioclase from amphibolite and greenschist facies rocks, 88M/1476; Monviso ophiolite complex, eclogites, geochem. modifications related to oceanic metamorphism, 88M/0801; retromorphic Fe-rich talc in low-T eclogites, 88M/1474; Lago Superiore area, deformational, metamorphic history, poss. record of subduction-collision cycle, 88M/6400; Susa Valley, basaltic, gabbroic metaophiolites, geochem., 88M/2213; W Alps, Val d'Ala, greenschist altered metabasalts, petrol., min. data, 88M/1381

SARDINIA, application of chem. geothermometers to hydrothermal systems, 88M/2123; chem., structl. order in hydrothermal, sedimentary kaolinites, 88M/3347; geochem. of mantle xenolithbearing lavas, crustal assimilation by mafic alkaline magma, 88M/0714; geol., mineralogy, (book), 88M/1709; mines, mins. of, 88M/3157; nature of lithosphere beneath continental block, mantle and deep crustal inclusions in mafic alkaline lavas, 88M/2836; new bentonite deposit, 88M/0170; prospecting for mineralization related to Tertiay volcanism, 88M/2463; Arcuentu, calc-alkaline volcanic complex, K/Ar dating, 88M/0014; Cagliari, Arcu su Linnarbu, bassetite and other U

mins., 88M/2650; Corona di Corvu, pyrolusite, destabilization of, 88M/4288; Masua mine, calcite, quartz, baryte, from karstic caves, fluid inclusion, stable isotope studies, 88M/0609; Montevecchio mining complex, mins. from, 88M/1579, 88M/4820; Nurallao and Laconi, refractory clays, geol., min., chem. study, 88M/1757; Olmedo, bauxite deposits, min. data, 88M/1937; Sardinian batholith, leucogranites, petrol. aspects, relevance to metallogenesis, 88M/1249; Tempio, granite massif, petrogr., geochem., structl. studies, 88M/1163

-, SICILY, mafic microgranular xenoliths in granitic rocks, petrol., 88M/4475; tr. elem. distribn. in aquifers and surface waters, 88M/2380; use of Sr isotopes to determine sources of hydrothermal fluorite, baryte, 88M/5578; SE, saline lakes, geochem. features, 88M/2379; Hyblean plateau, Cozzo Molino, ultrabasic, basic nodule suite in tuff-breccia pipe, petrol., 88M/6173; Mt. Etna volcano, 1983 lavas, REE, Sr-Nd isotopic compn., 88M/0713; 1984-1985 effusive activity, 88M/6237; 1985 eruption, ground tilt related to volcanological observations, 88M/4555; approach to problems on energy sources based on seismological, volcanological 88M/4556; evolution of lava flow-fields, observations of 1981, 1983 eruptions, 88M/1304; identifying diff. regimes in eruptive activity, 88M/4558; pyroclastic deposits, petrol., 88M/2897; recent eruptive activity, 1981-1985, 88M/4553; ultrabasic xenoliths, petrol., 88M/6172; volcanic activity, poss. seismological precursors, 88M/4554; Monte Frumento delle Concazze, reinjection, min. disequilibrium in magma, 88M/1248; Mt. Etna and Vulcano Is., mapping of surface T using airborne scanner radiometer, 88M/4557; SW flank of Mt. Etna, travertine, U-series dating, 88M/4887; Peloritani Mts., chem., min. data for scheelites, 88M/4309; Scordia, harzburgite xenoliths in Quaternary basanitic lava, 88M/2837; Sicily Channel, Pantelleria, eruptive history in last 50 ka,

IVORY COAST, *Bondoukou granite*, petrogr., geochem., geochronol., 88M/0023

Izoklakeite, Bi-rich, (Sb,Bi,Pb) ordering in, crystal struct. refinement, 88M/0276

Jacobsite v. spinel Jade v. pyroxene

Jadeite v. pyroxene Jamesonite, *Romania*, *Ba*

Jamesonite, *Romania, Baia-Mare dist.*, curved crystals, occurrence, growth models, 88M/3124

—-group minerals, China, Guangxi, Dachang ore field, new advances in study of, 88M/5260

JAPAN, Ag/Au ratio of native gold and electrum, geochem. envt. of gold vein deposits, 88M/4285; debris avalanche deposits, characterization, 88M/1320; Fe-deficient olivine struct. type mins., occurrence, 88M/4241; late Permian/early Triassic orogeny, piling up of nappes,

transverse lineation, continental subduction of Honshu block, 88M/2696; long-term eruption rates, dimensions of magma reservoirs beneath Quaternary polygenetic volcanoes, 88M/1323; seabed sand mining, 88M/3608; two geol. types glaucophanitic terrains, 88M/4746; variation of Al2O3 content in late Cainozoic basalts, 88M/1318; SW, tr.-elem. variations in acidic rocks, 88M/5652; NE Japan arc, Quaternary volcanic rocks, geochem., 88M/1392; central, two overlapping plates subducting beneath, revealed by Sr isotope data, 88M/0683; Ata, pyroclastic flow deposit, depositional ramps, assymetrical distribn. struct., 88M/4579; pyroclastic flow deposit, ground layer of, evidence for capture of lithic fragments, 88M/6247; Funka Bay, mechanism controlling Cd, PO₄ concentrations, 88M/5331; Hamana Lake, clay mins. in surface sediments, 88M/3414; Higo metamorphic rocks, metamorphic process, correlation to isotopic age, 88M/2356; Hishikari, gold deposit, case history, present status of exploration, 88M/5259; Kinki dist., Ikomayama Mts., gabbroic rocks, petrol., 88M/2863; Minamidaitojima Is., geochem. behaviour of transition metals during formation of protodolomite, 88M/5722; Miyakejima volcano, October 1983 eruption, 88M/1322; Niijima Is., two-stage mixing in magmatic inclusions and rhyolitic lava domes, 88M/1324; Okinawa Trough backarc basin, active hydrothermal mounds, dive studies, 88M/3905; Okuaizu geothermal field, use of Petrex fingerprint soil gas geochem. technique in geothermal exploration, 88M/5929; Okueyama volcano-plutonic complex, Miocene Valles-type caldera cluster, 88M/1325; Ryoke and Sanbagawa belts, non-stoichiometry of interlayer cations in micas from low- to middle-grade metamorphic rocks, 88M/6030; Tanzawa Mts., tectonics, constraints metamorphic petrol., 88M/3101; Usu volcano, fracturing assoc. with 1977-1978 geophys. eruption revealed by measurements, 88M/4580; Uta-jima, Sr isotopic study of mafic inclusions, 88M/2243

—, BONIN ISLANDS, Chichijima, magma mixing in boninite sequence, 88M/1321

-, HOKKAIDO, Cainozoic volcanic rocks, geochem. variation with time, 88M/0681; SW, variation in Ba, Sr, Li, Rb concentrations in granodiorite during chem. weathering, 88M/3951; Futamata and Tomuraushi, granitic inclusions from pyroclastic flow deposits, K/Ar dating, 88M/3238; Hidaka metamorphic belt. granulite facies rocks, P-T condns., 88M/3102; metamorphic evolution. 88M/6414; olivine-, garnet-bearing norite, min. data, 88M/4507; Horoman ultramafic complex, highly refractory peridotites, petrogr., 88M/1281; Ishikari Bay, heavy min. compn. of marine sediments, 88M/2991; Matsumae, plutonic complex, petrol., mineralogy, fractional crystallization, 88M/4506: Oshima

Peninsula, Cainozoic volcanic rocks, tuffs, fission-track dating, 88M/1628; Sanru and Koryu mines, K/Ar dating, 88M/3237; Tokoro belt, piemontite from manganiferous ore deposits, 88M/6007

-, HONSHU, tungsten province, base, precious metal mineralization, K/Ar dating, Highland, Abukuma 88M/1631; Matsukawa-ura, tonalites, chem. compn., 88M/2244; Abukuma metamorphic terrain, dumortierite-bearing argillaceous gneisses, 88M/4250; Asama volcano region, salt accumulation at cliff base, 88M/3845; Lake Biwa, identification, correlation of volcanic ash layer by EDX spectrometry of volcanic glass in deep drilling core, 88M/2907; Hitachi metamorphic terrain, talc deposits, 88M/1944; Kanto, Tertiary volcanic rocks, chem. compns., Sr isotopic ratios, 88M/3952; S. Kitakami Mts., grain growth, re-orientation of phyllosilicate mins. during development of slaty cleavage, 88M/6369; Kyoto, Daimonji, origin of sector trilling in cordierite in hornfels, 88M/2551; Oga peninsula, Ichinomegata crater, calc-alkali andesite magma, genesis, 88M/1319; Shingu, peridotite xenoliths in lamprophyre, petrol., implications for origin of Fe-rich mantle peridotites, 88M/4505; Shitara dist., subvolcanic struct. of central dyke swarm assoc. with ring complexes, 88M/6196; Shizuoka University, Oshika fm., On-Pm 1 tephra, descriptn., 88M/1326; Takaoka, tritiogenic ³He in groundwater, 88M/5824; Tateyama-gawa, Hida metamorphic rocks, metamorphic T estimated by cordieritegarnet, garnet-biotite geothermometry, 88M/4743; Yokohama, Shimosueyoshi loam beds, sedimentary envt., clay mins., 88M/1761; AKITA PREF., Furutobe mine, As-bearing renierite, occurrence, anals., 88M/4321; FUKUI PREF., Mino Terrain, length-slow chalcedony in Palaeozoic-Mesozoic strata, geol. significance, 88M/2990; GIFU PREF., Kamiioka mining area, kamiokite, new min., 88M/4341; Sakashita-cho and Takayama-shi, basalt, K/Ar dating, 88M/1629; IWATE PREF., Kamaishi mine, compositional variation of pentlandites in Cu sulphide ores, 88M/1047; YAMAGATA PREF., Atsumi Sumiyoshizaki, alkali dolerite sheet, petrol., 88M/4508

—, KYUSHU, N., grain-size dependent variation of Rb content in biotite from granodiorites, 88M/2132; Gokase River, Shimanto Belt accretionary complex, structl. evolution, 88M/4403; Hohi geothermal area, volcanic rocks, K/Ar dating, palaeomagnetic study, 88M/1630; Nomo peninsula, Nagasaki metamorphic rocks, omphacite-bearing reaction zone, 88M/3104; FUKUOKA PREF., Munakata coal field, zeolitic diagenesis of Palaeogene formations, 88M/4744

—, RYUKYU ISLANDS, fluctuation of carbonate and interstitial-exchangeable elems. in ocean sediments, 88M/2319; Kikai volcano, Sr isotopic relations of bimodal volcanic rocks, 88M/0733 —, SHIKOKU, Palaeozoic—Cainozoic sandstone, shale, chem. variation, 88M/2318; Kurosegawa tectonic zone, howieite, occurrence, anals., 88M/4261; Sanbagawa, REE-bearing epidote from pelitic schists, 88M/2128; Mesozoic high-P metamorphism, ³⁹Arf⁴⁰Ar dating, 88M/1633; Sanbagawa metamorphic belt, comparison of graphitizing-degree and metamorphic zones, 88M/4745; Sebadani metagabbro mass, Sanbagawa schist, resorption-overgrowth of garnet in contact aureole, 88M/3103

JAPAN SEA, Th, protactinium isotope distribns., 88M/4105

JAPANESE ISLANDS, petrol. model of mantle wedge and lower crust, 88M/1214; slope sediments around, clay mineralogy, 88M/3415; structs., geodynamic processes in deep sea trenches, Project Kaiko, introduction, 88M/1172; xenoliths in basalts, andesites, dacites, 88M/2755

Jarosite, synthesis of, 88M/5433, 88M/5434; Switzerland, Valais, occurrence with zincocopiapite, 88M/2639; Thiobacillus biogenetic action as precipitating agent of, 88M/5570

— deposit, Canada, Northwest Territories, Fort Norman area, formation on Cretaceous shales, 88M/1058

Jaskolskiite v. meneghinite

Jasperoid, anal. of fluid inclusion gases in, as exploration method for micron Au deposits, 88M/2491

Jeremejevite, synthetic fluoric, crystal struct., 88M/3508

Jersey v. Channel Islands

JORDAN, alunite, occurrence, 88M/1749; tripolization of chert, 88M/2985; coastal, ¹⁴C deformation chronol., 88M/0027; SW, age of latest Precambrian volcanism, re-evaluation, 88M/0028; Aritain volcano, spinel-lherzolite xenoliths, petrol., 88M/6243

Junitoite, named after Jun Ito, short biogr., 88M/6483

Jurbanite, struct. refinement, 88M/3505; *Italy*, *Tuscany*, *Cetine mine*, occurrence in oxidation zone, 88M/1059

Kaatialaite, Germany, Black Forest, Wittichen, occurrence, 88M/3163

Kadyrelite, USSR, Tuvinskaya ASSR, Kadyrelsky ore manifestation, new oxyhalide of Hg, 88M/4340

Kaersutite v. amphibole

Kainite, evaporitic origin, water of crystallization, O isotope fractionation anal., 88M/2143; H isotope fractionation factor between water of crystallization and parent solution, exptl. study, 88M/5571

Kalsilite, *Italy*, *Alban Hills*, in ejecta, 88M/2602

Kamiokite, Japan, Gifu Pref., Kamiioka mining area, new min., 88M/4341

Kaolinite v. clay minerals

Karibibite, Brazil, Minas Gerais, Urucum pegmatite, occurrence, 88M/2618

Karstic cavities, *E. Pyrenees*, in dolomite, mineralization of, 88M/4318

Kentrolite-melanotekite series, stability, kinetic studies of synthetic solid solutions in, 88M/3747

KENYA, clay mins. and humus complexes in soils derived from volcanic ash, 88M/1763; Quaternary peralkaline silicic rocks and caldera volcanoes, petrol., 88M/2796; unusual V-bearing beryl, anals., 88M/0982; W, kimberlites, airborne geophys. survey, 88M/1256; Bakata fm., Buluk Member, tuffs, fission track age of, 88M/4893; Gregory Rift Valley, Kedong-Naivasha-Kinangop region, stratigr., geochronol., volcano-tectonic evolution, 88M/3224; Gregory Rift, Lakes Baringo, Bogoria, sedimentary basins, hydrol., sedimentary history, 88M/4381; Kanam and Kanjera, geochem. study of rocks, spring waters, implications concerning elem. mobility, uptake, 88M/0597; rift alkaline province, petrol., 88M/2795; rift zone, dry peralkaline felsic liquids, CO₂ flux through, 88M/1211; Turkana, volcanic cycles, magmatic evolution, 88M/4570; volcanic rocks, K/Ar dating, 88M/3223

Kenyaite, synthesis in presence of various anions, 88M/0568

Keratophyre, Cameroon, Poli, pan-African pre-orogenic belt, from volcanic assocn. consistent with ensialic tectonic model over thinned continental crust, 88M/1310

Kermesite, struct. refinement, symmetry, twinning, comparison with stibnite, 88M/3495

Kerogen v. hydrocarbons

Kerolite, 25°C, 1 atm dissolution expts., 88M/3379

Kersantite, W. Europe, and minettes from Hercynian orogen, geochem. comparison between, tr. elem., Pb-Sr-Nd isotope constraints on origin, 88M/3926

Keyite, named after Charles Locke Key (1935-), 88M/4841

Khademite, min. nomenclature, 88M/2641

Kieserite, crystal struct., 88M/1829; in evaporitic basin, genesis, distribn. of, 88M/4646

Kimberlite, and carbonatites, interrelation of, problems of deep formation of magma, 88M/2850; ion microprobe detn. of REE in perovskite from, 88M/5564; lherzolite xenoliths in, petrogenetic, crystallochem. significance of minor, tr. elems. in olivine, pyroxene, garnet, spinel, 88M/2541; MARID suite of xenoliths in, relationship to veined, metasomatised peridotite xenoliths, 88M/2764; megacrysts from, min. data, 88M/2762; metasomatized harzburgite in, enriched restites and 'flushed' lherzolites, 88M/3013; relationship with olivine and leucite lamproites, inferences for upper mantle metasomatism, 88M/2788; sulphide mins. from, and Cu-Ni mineralization, 88M/2166; thermomagnetic quick anal. in study of, estimates of productivity, 88M/3135: transfer of subcratonic C into, 88M/1212; xenoliths, cratonic setting, 88M/2749; southern Africa, harzburgites with garnets of diamond facies from, 88M/2767; Sr. Nd isotopic, REE evidence for genesis of megacrysts in, 88M/2780;

Western Australia, xenoliths 88M/2752; Brazil, Goiás exploration for, min. chem. of stream sediment samples, 88M/2507; Canada, Northwest Territories, Somerset Is., Ham, ultrabasic xenoliths from, 88M/4513; China. mantle xenoliths from, 88M/2747; central W Greenland, Sisimiut area, dykes, min. chem., crystallization sequences 88M/2810; India, Andhra Pradesh, Vajrakarur area, and lamproite rocks, 88M/1276; S India, Proterozoic, xenoliths in, petrol., geophys. implications, 88M/2750; W Kenya, airborne geophys. survey, 88M/1256; N Lesotho, garnet lherzolite xenoliths in, revised P-Tequilibration condns., upper mantle palaeogeotherm. 88M/6183: Namibia. Gibeon field, megacrysts in, 88M/2844; South Africa, Cape Province, relationship of melilitites to, 88M/1260; Jagersfontein, relationships between eclogites and megacrysts from, 88M/1259; Roberts Victor, diamond from, C isotopic compn., N content, inclusion compn., evidence for ¹³C depletion in mantle, 88M/0612; USA, Arkansas, Blue Ball, mineralogy, petrol., geochem., 88M/1292; Kansas, Riley County, newly discovered, characteristics, 88M/4427; continental USA, xenoliths in, 88M/2735; E USA, magma mixing and kimberlite genesis, min., petrol., tr. elem. evidence, 88M/4420; USSR, Mir pipe, deep rock xenoliths, 88M/1274; Yakutia, hexahydrite from, 88M/4325; IR spectra, isotopic compn. of H, O in mica from, 88M/2131

Kimberlitic rocks, mineralogical factors of, 88M/3136; *India*, *Andhra Pradesh*, *Maddur*, new find, 88M/6190

Kimzeyite v. garnet

Kipushite, USA, Montana, IR spectra, 88M/6078

Kobellite, *Portugal*, *Aljustrel*, occurrence, 88M/5196

Kolicite, relation of manganostibite to, 88M/4307

Komatiite, accessory Cr-spinellids of, chem. compn., problem of genesis, 88M/2614; altered, ratio correlations, major elem. in, comment, 88M/5618; Archaean, chem. compn., implications for early history of Earth, mantle evolution, 88M/0676; southern Africa, Archaean Au mineralization and, 88M/0332; Australia, Agnew Ni deposit, role of fluids in metamorphism of, 88M/1458; Western Australia, Kambalda, ocellar, and ground melting, Pb isotopic study, 88M/6254; Baltic Shield, role in plate tectonics, evidence from Archaean, early Proterozoic crust, 88M/2673; Canada, Ontario, Abitibi greenstone belt, fractionation of Pt-group elems. and Au in, 88M/0286; Boston Township, unusual Fe-rich basaltic, petrogr., geochem., 88M/6270; Deadman Hill area, geochem., 88M/0741; Munro Township, clinopyroxenes, quantitative REE SIMS anals., 88M/5553; Newton Township, lowand high-alumina, Archaean, geochem., 88M/5668; Quebec, Cape Smith, Archaean,

development of compositional and textural layering in, 88M/1196; Finland, Tipasjärvi greenstone belt, Archaean, fractionation processes, 88M/1231; South Africa, Barberton Mountain Land, Archaean, origin, timing of metasomatic silicification of, 88M/3025; USA, California, Klamath Mts., Sawyers Bar area, mafic meta-ignous arc rocks of komatilitic affinities, 88M/1216; Zimbabwe, Belingwe greenstone belt, uniquely fresh 2700 m.y., mineralogy, 88M/4571

— complex, Finland, Sattasvaara, pyroclastic, petrol., 88M/2890

— flows, Canada, Abitibi Greenstone Belt, petrogr., geochem., model for formation, 88M/2273, reply, 88M/2274; Munro township, Archaean, comparative Re—Os, Sm—Nd, Rb—Sr isotope, tr. elem. systematics for, 88M/3965

— suites, Canada, Ontario Alexo, and Colombia, Gorgona Is., noble metal abundances in, 88M/2272

— – series rocks, S contents, δ^{34} S for, 88M/3942

KOREA, compositional variation sphalerites from hydrothermal metallic ore deposits, 88M/1050; graphitization of anthracites, TEM, XRD studies, 88M/4663; Cheonan-Cheongyang-Nonsan mining dist., Au-Ag-bearing vein deposits, stable isotope, fluid inclusion studies, 88M/3554; Chuncheon, jade, min., gemological characterization, 88M/0577; Dae-Hwa, W-Mo mine, stable isotope studies, evidence of meteoric water interaction, 88M/0645; Hambaeg basin, Hambaeg syncline, host-rock lithogeochem, applicable to exploration, 88M/0871; Ulreung Is., plutonic inclusions, olivine in high-K volcanic rocks, 88M/4582; Weolseong, welded tuff infilling volcanic vent, 88M/1327

Kornerupine, Afghanistan, Sar-e-Sang, whiteschist locality, implications for tourmaline-kornerupine distribn. in metamorphic rocks, 88M/6012; Canada, SE Ontario, occurrence, 88M/6013; Greenland, Fiskenæsset, B-bearing, re-examination of specimens from type locality, 88M/0985

Krypton, isotopic fractionation of Kr, Xe implanted in solids at low energies, 88M/0509; S-process Kr of variable isotopic compn. in Murchison meteorite, 88M/5960

Kularite v. monazite

Kunzite v. pyroxene

Kutnahorite v. rhodochrosite

KUWAIT, Ca-poor dolomite from sabkhas, 88M/4327

Kuzminite, new natural halide of Hg, 88M/1092

Kyanite, greyish, inclusions in, 88M/5511; simulating dissolution of Al₂SiO₅ polymorphs in HCl at high *T, P* in, 88M/5457; Western Australia, Errabiddy, and garnet, gedrite, in gneisses, corona textures between, 88M/3105; Scotland, in mainland Lewisian complex, 88M/1468; USA, Georgia, Blue Ridge, in amphibolite, 88M/4757

Labradorite v. feldspar

Laccoliths, USA, Utah, Henry Mts., laccolith-stock controversy, new results, 88M/6218

Lacustrine basin, *Turkey*, *Hisarcik*, *Emet*, geol. investigation, 88M/1423

Lahars, New Zealand, Ruapehu, kinematic wave theory, 88M/6260

Lake v. sediments, lake, and water, lake

Laihunite, olivine-type min., USA, Colorado, and Japan, occurrence, 88M/4241

Lamproite, aluminous spinels in, occurrence, significance, 88M/1027; and other K-rich igneous rocks, review of occurrence, mineralogy, geochem., 88M/2789; Western Australia, xenoliths from, 88M/2752; central W. Greenland, Sisimiut area, dykes, min. chem., crystallization sequences in, 88M/2810; India, Andhra Pradesh, and Vajrakarur area, kimberlites, 88M/1276; USA, Arkansas, Pike County, Twin Knobs TK1, geol., petrogr., 88M/4428; Arkansas alkalic province, Cretaceous, petrol., geochem., 88M/4429; Montana, Smoky Butte, davanite, K2TiSi6O15, X-ray powder data, 88M/2575

Lamprophyre, and granitic rock, weathering process at contact between, microstructl., min., geochem. study, 88M/5030; nature, origin, overview, 88M/2790; France, Massif Central, Saint-Sylvestre, cutting across hyperaluminous granite, petrol., origin, 88M/6165; Hungary, Velence and Buda Mts., alkali, high-, low-P cognate clinopyroxenes from, 88M/4253; India, Maharashtra, Murud-Janjira, xenolithbearing, geochem., petrol., 88M/1275; Japan, Shingu, peridotite xenoliths in, petrol., implications for origin of Fe-rich mantle peridotites, 88M/4505; Zealand, South Island, Westland and Otago, alkaline, Sr, Nd, Pb isotope study, 88M/4421; Spain, Sierra de 'Gredos, petrogr., geochem., differentiation models, 88M/1240; Switzerland, central Alps, meta-, geochem., 88M/2349; Poland, Upper Silesia, Zawiercie, phlogopite from, chem. anals., 88M/2579

— dykes, N. Scotland, late Palaeozoic alkali, petrochem., 88M/2822; New Zealand, and age of Alpine fault, 88M/3241; Scotland, Ardgour, Lismore, dyke swarms, parallel Caledonian, Permo-Carboniferous, regional, tectonic implications, 88M/2823

Lamprophyric magmatism v. magmatism, lamprophyre

Langbeinite, in evaporitic basin, genesis, distribn. of, 88M/4646

Lanthanides, uptake by vermiculite, 88M/4988 Lanthanum compounds, LaYO₃, new modification, 88M/0529

Lapis lazuli v. lazurite

Laterite, duricrust, variations in props. of iron oxides within, 88M/3386; indium in laterite process, 88M/0757; lateritic terrains, geochem. evolution, 88M/2286; morphol., geochem. evidence of dissolution, crystallization of gold in, 88M/3853; Australia, Darling Range, bauxitic, muscovite in, 88M/5034; Brazil and Africa, climate, palaeoclimatic inferences from

distribn., min. compn. of, 88M/6333; Brazil, Mato Grosso, gold concentration in, 88M/1900; Greece, genesis during Jurassic, Cretaceous, relation to ultrabasic parent rocks, 88M/1938; Ni-, genesis during Jurassic, Cretaceous, relation to ultrabasic parent rocks, 88M/1938; India, Karnataka State, South Kanara, Paduvari plateau, laterite-bauxite, mineralogy, 88M/1773; Sierra Leone, footslope, compn., fabric, geomorphol. significance, 88M/2302; Venezuela, VL-1, standard ref. material, statistical parameters for tr. elems., 88M/2510

Laumontite v. zeolite

Laurite, new type of Pt mineralization, 88M/0285

Lava, Mexico, Chiapas, El Chichón Volcano, XRF anals., inter-lab. comparison, 88M/2509; New Zealand, Tongariro volcanic centre, petrogr., origin of metasedimentary xenoliths in, 88M/4587; Scotland, Ballantrae complex, Balcreuchan Port borehole, geochem. assocns. of lava sequence, 88M/5626; Inner Hebrides, Glas Eilean, evidence of Lower Permian volcano-tectonic basin between Islay and Jura, 88M/2891; USA, Hawaii, Haleakala Crater, isotopic evolution, 88M/2265; Kilauea Volcano, differentiated, age of, implications from 1955 eruption, 88M/4593; Kilauea and Mauna Loa, tr. elem. chem., reconnaissance, 88M/2256; Mauna Loa, 1984, rheolog. props., 88M/1348; USSR, Bering Sea, Shirshov Ridge, Cenotypic, and mantle xenoliths, combined study, 88M/4584

–, alkaline, tr. elem. distribn. coefficients in, 88M/0605; Indian Ocean, Kerguelen Is., U, Th in, 88M/0722

—, basaltic, delayed fractionation of, 88M/6232; Pacific Ocean, Tahiti, harzburgite xenoliths in, first discovery, 88M/2950

—, basanitic, *Italy*, *Sicily*, *Scordia*, harzburgite xenoliths in, 88M/2837

—, basic, France, Tarn-Aveyron, Saint-Salvi-de-Carcavès nappe, petrol., 88M/6233; Greece, Argolis Peninsula, Ermioni area, basic lava series, tr., REE geochem., 88M/2224

--, boninitic, low-Ti subduction-related, from intraoceanic arc-backarc systems and ophiolites, petrogenesis, tectonic setting, 88M/6300

flows, basaltic, cooling thermo-mechanical model for incremental fracturing in, 88M/4539; evolution of polygonal fracture patterns in, 88M/4544; lab. simulation, 88M/2886; England, Lake District, composite, Ordovician, petrol., 88M/2892; USA, Hartford Basin, Jurassic, hydrothermal addition of excess ⁴⁰Ar to, implications for time scale, 88M/3250; Hawaii, Kona, Mauna Loa and Hualalai volcanoes, petrogr., 88M/4592

- lake, USA, Hawaii, Kilauea Iki, geothermometry, 88M/4591

 pillow, multiple-rind struct. in, as indicator of shallow water, 88M/6255; New Zealand, North Island, mineralogy, chem., tectonic significance, 88M/1330

— series, Greece, Dodecanesos, Patmos, transitional alkaline-sub-alkaline, geochem., 88M/5634

—, tholeiitic, USA, Hawaii, Kahoolawe Is., alkalic, unusual hydrothermal(?) 'enrichment' characteristics, 88M/0737

—, toothpaste, structl. type transitional between pahoehoe and aa, characteristics, origin, 88M/1333

—, ultramafic, Greece, Othrys ophiolite complex, Agrila fm., komatiite-type, 88M/1383

Lawsonite-bearing veins, New Zealand, Wellington Peninsula, Torlesse, in greywacke, metabasite, 88M/4748

Lazulite, *Italy, Giogo di Toirano*, phosphate mineralization in Permo-Triassic sequence, 88M/1073

— group, hentschelite, new member of, crystal struct., 88M/5161; Germany, Reichenbach, new Cu phosphate min., 88M/1091

Lazurite, lapis-lazuli, and simulants, anals., 88M/5510; Hong Kong, min. watch cases, descrptn., 88M/0585

—, ultramarine, disordered aluminosilicate framework, magic-angle-spinning NMR, 88M/1814

Lead, anthropogenic, selective extraction from sediments using Tiron, 88M/0410; detn. in annually-banded corals, 88M/5946; from dust, water as exposure sources for children, 88M/3618; industrial, natural, review of data on aeolian fluxes of, to lands, seas in remote regions on global scale, 88M/3626; isotopic compn. measurements in sea-water, accuracy, precision, 88M/4183; Pb-based paint in dwellings, potential contamination during home renovation, 88M/3617; England, Birmingham, air concentrations inside, outside homes, comparison, 88M/0411; Indian sub-continent, in river sediments, transport, fractionation, 88M/2312; New Zealand, Manukau Harbour, in sediments, 88M/5333; North Sea, model simulation of atmospheric input of, 88M/5319; USA, Gt. Smoky Mt. National Park, in vegetation, forest floor, soils, 88M/1981

 deposits, Norway, 'Sparagmite region', in sandstone, exploration for, 88M/2459

— isotope dating v. age determination

— isotopes, ²¹⁰Pb, and other low energy photon emitters, levels of, studied by planar Ge(HP) spectrometer, 88M/5312

— — antimony mineralization, Wales, Deganwy, Bwlch mine, occurrence, 88M/6066

— -zinc deposits, Mississippi Valley-type, sulphate-sulphide-carbonate assocns., 88M/0667; tr. elems. in galena, sphalerite, geochem. significance in distinguishing genetic types of, 88M/0618; two Mississippi Valley-type, organic geochem., 88M/0858; Australia, Broken Hill and Mt. Isa, 88M/3556; Broken Hill, sedimentary model, 88M/0384; Queensland, dolomitic shalehosted, min. distribn. of pathfinder elems. in gossan derived from, 88M/3854; China, Inner isotopic geochem., 88M/3854; China, Inner

Mongolia, Jiashengpan Pb-Zn-S ore belt, geol. setting, genesis, 88M/0379; Shaanxi, Feng-Tai ore field, stratabound, fossil erosion surface, control of palaeo-struct. in mineralization in, 88M/3595; Turkey, Zamanti (Aladağlar-Yahyali) region, carbonate-bearing, geochem. prospecting for, 88M/4172; Spain, Grupo Cantabria, lithostratigr., min. data, 88M/3581

— mineralization, Australia, Queensland, Pegmont, BIF-assoc., oxidized profile of, 88M/2469; France, Hérault, Bois Madame, confined within carbonate platform, 88M/3576; La Rabasse, 88M/5247; SW Germany, formation of, report, 88M/3536; Netherlands, in Dinantian rocks of boreholes, 88M/3855; Turkey, Yenice—Cannakkale, Arapucandere, fluid inclusion studies, 88M/0375

— — sulphide deposits, Canada, Yukon Territory, Jason deposit, Devonian sedimentation along submarine fault scarp, 88M/0358

-- - - copper deposits, Canada, Dist. of Mackenzie, Artillery Lake, geol., 88M/1899
 -- - - - fluorine mineralization, Nigeria, Benue Trough, Arufu and Akwana, mineralogy, fluid inclusions, genesis, 88M/3593

-- — -silver deposits, Australia, exploration, 88M/5208; Bolivia, Asientos mining dist., Quioma mine, geol., 88M/5294; China, Yendonggou, geochem., genesis, 88M/5591

Leiteite, ZnAs₂O₄, novel tetrahedral layer struct. with arsenite chains, 88M/0274

Leonite, crystal struct., 88M/3506

Lepidocrocite, cellular, precipitation, and heavy-metal sorption in alga, implications for biomineralization, 88M/2621

Lepidolite v. mica

Lepidomelane v. mica

Leptynite-khondalite suite, *India, Kerala*, progressive charnockitization of, evidence for formation of charnockites through decrease in fluid *P*, comment, 88M/4731, reply, 88M/4732

LESOTHO, N., garnet lherzolite xenoliths in kimberlites, revised P-T equilibration condns., upper mantle palaeogeotherm, 88M/6183; Matsoku kimberlite pipe, metasomatic, enrichment phenomena in garnet peridotite facies mantle xenoliths, 88M/3014

LESSER ANTILLES, crustal contamination vs. subduction zone enrichment, implications for mantle source compns. of island arc volcanic rocks, 88M/2279

Leuchtenbergite v. chlorite

Leucite, natural, synthetic, studied by solid state ²⁹Si, ²⁷Al NMR, ⁵⁷Fe Mössbauer spectroscopy, 88M/5126; ²⁹Si NMR study of Si,Al ordering in, 88M/5127; standard XRD powder patterns, 88M/3446

Leucitite, orogenic, sediment subduction and source of K in, 88M/0711

Leucogranite, peraluminous, U geochem. in, 88M/2197; England, Cornwall, F-rich, phase equilibria, 88M/0460; France, Limousin, Variscan, U/Pb dating, 88M/4885; France, Massif Central, W.

Vivarais, anatectic, formed by partial melting of metagranites, 88M/3056; Himalayas, crustal generation, 88M/1277; Ireland, Connemara, within Galway granite, tr. elem. variation in, 88M/3924; Italy, Sardinian batholith, petrol. aspects, relevance to metallogenesis, 88M/1249; Morocco, Rehamnas, Hercynian, geol., 88M/1252; Spain, Avila, deformed, petrol., struct., 88M/1241

Levyne v. zeolite

Lewisian, and comparable Precambrian high grade rocks, evolution, (book), 88M/1703

Lherzolite, high-*T*, compositional heterogeneities in, implications for mantle processes, 88M/2769; *China*, *Hannuoba*, high-*P* hydrous min. assocn. in, 88M/6195

—, Cr-diopside, Australia, W Victoria, isotopic geochem., 88M/3957, metasomatic processes in, 88M/3956

—, garnet, textural studies, evidence of exsolution origin from high-*T* harzburgites, 88M/2768

—, spinel, France, Massif Central and Languedoc, relationship between geochem. and textural type in, 88M/2742; Uganda, mantle metasomatic fluids in, characterization, 88M/3012

— xenoliths, in kimberlites, basalts, petrogenetic, crystallochem. significance of minor, tr. elems. in olivine, pyroxene, garnet, spinel, 88M/2541; Japan, Oga peninsula, Oga peninsula, petrol., 88M/1319; Jordan, Aritain volcano, spinel, petrol., 88M/6243; N. Lesotho, in kimberlites, revised P-T equilibration condns., upper mantle palaeogeotherm, 88M/6183

LIBERIA, Mesozoic dolerites, asthenospheric, lithospheric sources for, tr. elem., isotopic evidence, 88M/3944; Precambrian granitic rocks, chem. features, 88M/2228

LIBYA, silica glass,type of tektite, Mössbauer effect study, 88M/2540

Lignin, and carbohydrates in anoxic fjord, comparative geochem., 88M/4152; depletion of ¹³C in, implications for stable C isotope studies, 88M/2420

Lignite v. coal

Lillianite, phase relations in systems Cu₂S-PbS-Bi₂S₃, Ag₂S-PbS-Bi₂S₃, 88M/2045

Limestone, biogenic magnetite as primary remanence carried in, 88M/1541; Devonian, authigenic quartz, albite in, origin, significance, 88M/2969; late Permian, C-isotope stratigraphic correlations, 88M/0755; South Australia, Fisherman Bay, megapolygon-spelean, recent, C, O isotopic compn., 88M/5723; Belgium, Massif de la Vesdre, Membach, stratig., sedimentol., geochem., 88M/4014; Nismes-Couvin, cavities in, filled with sandy limonite deposits, geol., metallogeny, 88M/4015; Arctic, Sverdrup Basin, Carboniferous to Permian 13C-enriched. comparisons with W. North American ocean margins, 88M/3997; Atlantic Provinces, Windsor (Codroy) group, oolitic, stromatolitic, base metals in, 88M/2332; Ontario, Niagara Peninsula, Palaeozoic, extraction techniques for production of high-specification aggregates from, 88M/5306; England, Lincolnshire, burial cements, Sr isotopic compn., origin, 88M/2298; N. England, regional maturation patterns for late Viséan rocks based on conodont colour, 88M/2962; S. France, freshwater, evidence for slowly changing ⁸⁷Sr/⁸⁶Sr in runoff from, 88M/5812; Italy, Gubbio, 'Red Scaglia', geol. significance of tr.-elem. abundances, 88M/5700; New Zealand, Wairarapa, Te Kaukau Point. Amuri facies, in situ and intrusive sandstone in, 88M/4665; Poland, Bardzkie Mts., Carboniferous, diagenesis, 88M/4650; Kujawy, Barcin region, Jurassic, silicification, neomorphism, 88M/4651; Zabierzów, marly, Palaeogene weathering of, 88M/3406; USA, Florida, Miami Limestone, Pleistocene, fluid inclusions in vadose cements, petrogr., 88M/5542; W high-Ca, supplemental core investigations for, 88M/5308; Wyoming, Niobrara County, Manville, high-Ca and dolomitic, geol., economic potential of, 88M/3611; Wales, Gower, Shipway, sedimentation on storm-dominated early Carboniferous ramp, 88M/6321; Pen-y-Holt, mud-dominated storm deposits from Lower Carboniferous ramp, 88M/2967

— cements, S. Wales, Carboniferous, CL zonation of, ion microprobe anal. of tr. elems. in calcite, 88M/5573

— reef, W. coast of Saudi Arabia, Pleistocene, early mixed-water dolomitization in, 88M/2986

— weathering, engineering significance, classification scheme, 88M/4623

Limonite deposits, *Belgium*, *Nismes–Couvin*, in cavities in limestone, geol., metallogeny, 88M/4015

Lindströmite, bismuthinite—aikinite derivative, structl. disorder in, 88M/4314

Lipids, bitumoid A, comparison of methods of isolating, from slightly lithified sediments, 88M/4122; dietary, biotransformation, assimilation by *Calanus* feeding on dinoflagellate, 88M/4128

Liquids, heavy, hazardous, nontoxic substitute for, aqueous sodium polytungstate (3Na₂WO₄·9WO₃·H₂O) solution, 88M/3260; Na₂O–K₂O–CaO–MgO–FeO–Fe₂O₃–TiO₂–SiO₂, densities of, new measurements, derived partial molar props., 88M/3687

Lithiophorite, significance of lithiophorite interface between cryptomelane and florencite, 88M/1077; Pacific Ocean, New Caledonia, compn., struct., new data, 88M/1078; USSR, Severoonezhsk region, discovery of, in bauxite-bearing deposits, 88M/6061

Lithium, systematics of Li abundances in young volcanic rocks, 88M/0696

Lithogeochemical sampling, 88M/2503

Lithosphere v. Earth

Lizardite v. serpentine

Lodestone v. spinel, magnetite

Loess, China, Zhaitang, Malan, TL dating, 88M/0031; India, geochem. studies, 88M/4033; USA, Alaska, Fairbanks, Old Crow tephra, Pleistocene, TL dating, 88M/3248; Lower Mississippi Valley, stratigr., geochem., TL ages, 88M/4916

Loparite, magmatic crystallization in system loparite-nepheline, 88M/0571

Lopezite, hydrodynamic effect of influence of impurity on growth of crystals, 88M/3704

Lopolith, Norway, Bjerkreim-Sokndal, nature of parental magma, 88M/6151 Loveringite, Finland, Koitelainen layered

intrusion, occurence, 88M/1026 Lucasite-(Ce), Western Australia, new min.,

descripn., struct.; 88M/2661 Ludjibaïte, *Zaïre*, *Ludjiba*, new min., 88M/6093

Ludlockite, named after Charles Locke Key

(1935-), 88M/4841 Lunar studies, basaltic fragments from lunar breccia 14321, isotopic anal., chronol., petrogenesis of pre-Imbrium volcanism, 88M/4187; basic rocks, ⁴⁰Ar/³⁹Ar ages, 88M/5948; coordinates of Moon reverse side sector objects, 88M/4190; ferroan anorthosite, 60025, poss. relict of primitive lunar crust, 88M/2515; formation of 'magma ocean' on terrestrial planets due to blanketing effect of impact-induced atmosphere, 88M/4192; geol. history of the Moon, 88M/4186; high-K aluminous mare basalt clasts from Apollo 14 breccia 14304, geochronol., 88M/4188; microtextures, chem. compn. of continental rocks from SAS, 88M/0931; origin of Earth-Moon system, comments, 88M/4191; palaeomagnetism, 88M/5950; partitioning of Fe, Ni, Co between olivine, metal, basaltic liquid, exptl., thermodynamic study, application to compn. of lunar core, 88M/5397; Rb/Sr anals. of Apollo 16 melt rocks, new age estimate for Imbrium basin, Lunar basin chronol., early heavy bombardment of moon, 88M/0929; reduced forms of elems. in, min. grains from lunar regolith, auger electron spectroscopy, 88M/2516; relationship between geol., geochem. in Undarum Spumans Balmer region, 88M/4189; rocks from Sea of Crises, $^{40}Ar_{-}^{39}Ar_{-}^{39}$ dating, 88M/0930; roles of evaporation, dissipation in formation of the Moon, 88M/5949; structl. features of two-phase clinopyroxene from lunar regolith, 88M/2559; subsolidus phase relations in system Zr-Fe-Ti-O in equilibrium with metallic iron, implications for lunar petrol., 88M/5411; unique lunar compn., bearing on origin of Moon, 88M/0928

Lyonsite, El Salvador, Izalco volcano, new fumarolic sublimate, descripn., crystal struct., 88M/2662

Macfallite, Greece, Epidavros ophiolite sequence, in Mn ore deposits, 88M/6060 Mafic rocks v. basic rocks

Magadiite, synthesis in presence of various anions, 88M/0568

Maghemite v. spinel

Magma, constraints on melting and magma production in crust, 88M/3650; crystal sizes, constraints on cooling regime, crystallization kinetics, 88M/0474; crystallizing, U

behaviour in, 88M/0688; density at high P, effect of compn. on elastic props. of silicate liquids, 88M/0469; density at high P, test of olivine flotation hypothesis, 88M/0470; dynamics of magma withdrawal from density stratified dyke, exptl. study, 88M/4465; effects of compn., T, P on fluidity, 88M/5370; effects of O fugacity on ratio between valency forms of V in, 88M/2200; forces controlling magma uprising, 88M/4464; low-18O, origin of, 88M/1222; magma-cumulate mixing identified by U-Th disequilibrium dating, 88M/3939; mantle-derived, roles of variable source peridotite and variable C-H-O fluid compns., 88M/0473; minette, crustal contamination of, evidence from ammonium contents, 88M/5610; mixing in squeezed conduit, 88M/2881; principal volatile components, min. inclusion data on characteristics of, 88M/0691; rutile saturation in, implications for Ti-Nb-Ta depletion in island-arc basalts, 88M/3649; significance of source vs. process in tectonic controls of magma genesis, 88M/0672; transportation of Be with H2O at high P, implication for magma genesis in subduction zones, 88M/5524; Aleutian Arc, test of quartz eclogite source for parental balance magmas, mass 88M/0738; Atlantic, Ascension Is., and fluid evolution in lavas, assoc. granite xenoliths, 88M/2793: Andes, Chile, Pedro-Pellado volcanic complex, crustmagma interactions, evolution of arc magma, 88M/0751; China, Meishan iron deposit, iron-rich, study on migration of, 88M/3596; Italy, Sicily, Etna, Monte Frumento delle Concazze, reinjection, min. disequilibrium in, 88M/1248; Kenya, dry peralkaline felsic liquids, CO2 flux through rift zone, 88M/1211; Norway, Fongen-Hyllingen layered mafic complex, compositionally stratified, emplacement, crystallization of, 88M/1190; Pacific Ocean, W. Melanesia, delayed partial melting of subduction-modified magma sources, new results from late Cainozoic, 88M/6301; Scotland, Skye, Palaeocene, Ce/Nd isotope study of crustal contamination processes affecting. 88M/0699; Spain, Central Volcanic Region, primary, differentiated, 88M/6171; USA, Montana, Stillwater complex, evolution, REE evidence for formation of ultramafic series, 88M/2277; E USA, magma mixing and kimberlite genesis, min., petrol., tr. elem. evidence, 88M/4420; NW USA, tectonic controls on genesis, evolution, 88M/0679

- —, agpaitic, Greenland, Ilímaussaq intrusion, progressive crystallization, formation of layering in, 88M/2804
- —, alkaline, dynamics of translithospheric migration of metasomatic fluid and, 88M/3009; genesis, source regions, exptl. studies, 88M/2785; geochem. criterion for metalliferous nature of, 88M/3884; geochem. of reduced fluid in, 88M/5642; Zr behaviour in, 88M/4243; Canada, Labrador, Nain igneous complex, Flowers

- River area, alkalic to transitional ferrogabbro, assoc. with anorthositic plutons, 88M/6209; Philippines, Luzon, Zambales ophiolite, oceanic, alkalic characteristics, evidence from basal cumulates, 88M/4423; USA, Texas, Trans-Pecos, Infiernito caldera, chem., thermal zonation in, 88M/6278
- ---, andesitic, sub-solidus dehydration of amphiboles in, 88M/6022
- basaltic, calcalkaline, formation of from, geochem., shoshonites exptl. constraints from type locality, 88M/6217; computer simulation of crystallization at fixed O fugacity, 88M/3646; fractionating, calculations of isothermal, isenthalpic assimilation, 88M/0475: Greece. Macedonia, Guevgueli igneous complex, and continental crust, study of interactions between, 88M/2223; India, Western Ghats, Traps, continental flood. relationships between crustal contamination and crystallisation in, 88M/2905; Indonesia, Sunda-Banda arc, island-arc, Quaternary volcanism, geochem., and three-component genesis of, 88M/0680
- -, basic, and acid, of various ages, Au distribn. in differentiation products of, 88M/0689; silicic, thermal, mechanical constraints on mixing between, 88M/1298; Sardinia, alkaline, crustal assimilation by, 88M/0714
- —, carbonatite, alkalic, parental or derivative?, 88M/2787; Norway, Fen complex, evolution of, REE, isotopic evidence, 88M/0698; Tanzania, Oldoinyo Lengai volcano, Ra–Th disequilibria systematics, timescale of formation, comment, 88M/4890, reply, 88M/4891
- chambers, compositional, thermal convection in, 88M/1185; convection, evolution of crystal-settling in, 88M/4413; effects of Earth's rotation on convection in. 88M/4463; evolutionary structs. in double-diffusive convection, 88M/4412; from below, steady double-diffusive convection in, 88M/1221; processes, lab. expts. with aqueous solutions modelling, cooling, crystallization along inclined planes, 88M/1203, validity, geol. application, 88M/1202; processes, model for simulation of combined major and tr. elem. liquid lines of descent, 88M/3914; vigorously convecting, crystal settling in, 88M/6146; Canary Islands, Tejeda Volcano, Mogan and Fataga fms., pyroclastic flows, lavas, min. chem., intensive parameters. magma chamber evolution, 88M/1300; Mexico, Iztaccíhuatl volcano, calc-alkaline, laser-interferometry study of oscillatory zoning in plagioclase, record of magma mixing, phenocryst recycling in, 88M/4276; Pacific Ocean, Aleutian and Pacific Ocean island arcs, depths, water content of. 88M/1284; E. Pacific Rise, axial summit graben, cross-sectional shape as indicators of axial magma chambers and recent volcanic eruptions, 88M/6296; Scotland. Rhum, basaltic replenishment of, evidence from unit 14, 88M/2824; USA, Colorado, Grizzly Peak tuff, zoned, compositional

- layers in, 88M/1358; *Hawaii*, xenolith populations, magma supply rates, development of, 88M/1332; *Oregon, Crater Lake, Mt. Mazama*, zoned calc-alkaline, compositional evolution, 88M/5674
- —, granitic, contribn. of enclave studies to understanding of origin, evolution of, 88M/4446; and basic, interaction of, exptl. observations on contamination processes at 10 kbar with H₂O, 88M/5369; emplacement, related structs., review, 88M/4450; evolution during ascent, phase equilibrium model, 88M/0481; intergranular solution, mineralization, 88M/0284
- —, island arc, origin of, exptl. evidence, 88M/1375; Andes, poss. contribn. of asthenosphere, below subducted oceanic lithosphere, to genesis of, 88M/2283; Indonesia, Sangihe arc, spatial patterns in mineralogy, 88M/1393; Philippines, recent enrichment events in sources of, Sr, Nd isotopic evidence, 88M/5663; Luzon Is., recent enrichment in source region of, Sr, Nd isotopic evidence, 88M/5662
- —, peraluminous, *Peru, Macusani*, obsidian glasses, evidence of chem. fractionation in, 88M/1223
- —, ultrabasic, influence of O, S fugacities on differentiation of Pt-group elems. in, 88M/0464
- -fluid system, chloride-ion behaviour, cation exchange in, 88M/3686
- Magmatic complexes, *Mongolia*, bimodal, genesis, 88M/1273; *USA*, *Vermont*, *Mt*. *Ascutney*, petrogenesis, 88M/5671
- processes, chem. mass transfer in, crystal growth, chem. diffusion, thermal diffusion in multicomponent silicate melts, 88M/0462; depths of mantle reservoirs, 88M/1207; mid-ocean-ridge, seamount lava geochem., implications for, 88M/3962; modelling of elem. pair behaviour during, application to volcanic rock series, 88M/2198; physicochem. principles, (book), 88M/0101; physics of magma segregation processes, 88M/1209; Canada, Quebec, Chibougamau area, Archaean sequence, palaeogeographic, palaeotectonic response to, 88M/4512
- rock series, problems, solutions, 88M/4440
 rocks, Indonesia, Kalimantan, Meratus Range, Cretaceous, petrol., 88M/4509; Israel, Timna Valley, Precambrian, evolution, 88M/1264; USSR, Kurile island arc, Recent, ¹⁴³Nd/¹⁴⁴Nd, ⁸⁷Sr/⁸⁶Sr ratios in, 88M/5648; Yakutia, Ulakhan-Sis ridge, petrochem., geochem. features, 88M/2236
- systems, modelling, petrol. applications, 88M/3672; modelling, thermodynamic relations, 88M/3671; natural, TRACE.FOR: program for calculation of combined major and tr.-elem. liquid lines of descent for, 88M/5365; neutral buoyancy, mechanical evolution of, 88M/1220
- Magmatism, at rifted continental margins, 88M/4607; bimodal, and assoc. sedimentary facies, particular ref. to correlation between orogeny, regression, 88M/4448; relation of tin mineralization with, 88M/0636; Australia, Pacific Rim, late Palaeozoic—Mesozoic, and mineralization, major

- thermal cycle contributing to, 88M/5219; NE Egypt, late Pan-African, crustal development, 88M/4488; SW England, geodynamic significance of post-Variscan intrusive, extrusive potassic, 88M/2204; Finland, Åland, late Svecofennian, petrol., 88M/2820; SW Germany, palingenetic, accompanying Hercynian orogenesis, 88M/4476; Greenland, Gardar province, mid-Proterozoic, petrol., 88M/2803; E Greenland, Tertiary, review, 88M/2805; Guinea, Gaoual region, Proterozoic, 88M/4496; Gt. Britain, continental extensional, Tertiary igneous province, asthenospheric, lower-lithospheric mantle contribns. to, 88M/6152; India, Delhi supergroup, 88M/4498; Italy, Stromboli, high-Sr radiogenic, mantle mixing, crustal contamination as origin of, 88M/5631; Mali, Adrar des Iforas, Pan-African belt, subsequent to collision, 88M/2799; Norway, Oslo rift, intermediate and silicic, petrogenetic processes assoc. with. 88M/5625; USA, Oregon and Washington, and mineralization, 88M/5238; Texas, Trans-Pecos, Tertiary, 88M/2801; USSR, Middle Urals, Revdinskii region, 88M/1266; Mongolian-Okhotsk belt, Mesozoic, poss. geodynamical interpn., 88M/0307
- —, alkaline, and mantle metasomatism, (book), 88M/3334; ultra-alkaline, with or without rifting, 88M/4492; NE Brazil, Cachoeirinha—Salgueiro foldbelt, Precambrian, geochem., 88M/5679; NW Scotland, syn-orogenic, relationship to Moine thrust zone, thermal state of lithosphere, 88M/4879; USSR, Central Aldan, Verkhneyakokutskiy graben, 88M/2848
- --, arc, *Chile, Andes*, crustal contribus. to, 88M/5682
- —, basaltic, USA, Appalachian Blue Ridge, Bakersville dyke swarm, Proterozoic, geochronol., petrogenesis, 88M/1289
- —, basic, W. Greenland, mid-Archaean, petrol., 88M/3031
- —, calc-alkaline, *France, Corsica*, Permian, genesis, 88M/1238
- —, granitic, Greenland, Godthåb region, Qârusuk dykes, petrol., 88M/2811
- —, lamprophyric, Scotland, Inner Hebrides, Ross of Mull, spatial, temporal intimacy between, around pluton, 88M/4466
- —, tholeiitic, *England, Lake District, Eskdale*, role of, evidence from dykes, 88M/6157
- Magnesiochloritoid, Western Alps, Monte Rosa, from high-P assemblage, crystal struct. at 25 and 700°C, 88M/5092

Magnesiowüstite v. periclase

- Magnesite, constitutional states, role of OH_n-groups in, at *T* up to 500°C, 88M/3767; *Eastern Alps*, C, O isotopes in, 88M/2141; *Nepal*, sparry, presence of microorganisms in, implications, 88M/3099; *USA*, *Pennsylvania*, *Lancaster County*, *Cedar Hill Quarry*, assoc. with nakauriite, 88M/1061
- deposits, *Spain*, *Nevarra*, *Eugui*, ore genesis, 88M/0398
- ore, bioleaching of silica from, 88M/0635

- Magnesium, use of layered synthetic microstructs. for quantitative anal., 88M/3312
- compounds, (Mg,Fe)O solid solutions, kinetics of internal oxidation, 88M/5409;
 MgO, thermal expansion of solids, review, 88M/1508
- Magnetic minerals, discrepancies between exptl. observations in natural, synthetic samples, 88M/1531
- studies, alteration and effects on reproducibility of archaeomagnitudes. 88M/1544; anisotropy of magnetic susceptibility of metamorphic mins., 88M/3130; basalt, changes in TRM, ARM due to lab. heating, 88M/1522; comparison of hysteresis characteristics of synthetic samples, 88M/1527; composite titanomagnetite-ferrian ilmenite grains and correlative magnetic components in dacite with self-reversed TRM, 88M/3128; detn. of maximum T profile across dyke contacts using remanent magnetization, 88M/6459; DSDP samples, basalts and sediments, 88M/3141; exptl. study of chem. and crystallization RM in magnetite, 88M/1524; hydrothermally recrystallized magnetite, magnetic props., 88M/1521; link between Archaean-Proterozoic boundary inner-core nucleation, palaeomagnetic data, 88M/3134; magnetic field reversals, polar wander, core-mantle coupling, 88M/3133; magnetic hysteresis props. of fine particle titanomagnetite precipitated in silicate matrix, 88M/1526; magnetic method applied to min. exploration, 88M/3131; magnetic susceptibilities of standard samples of silicate rocks, mins., 88M/3129; magnetic susceptibility, anisotropy of, anal. of rock struct., 88M/4354; model to explain Earth's magnetic field, 88M/3132; phase difference between sea-level and magnetic reversal rate, 88M/3173; physics of acquisition of post-depositional remanent magnetization, 88M/1525; rock magnetism, domain pattern observations in, progress, problems, 88M/1530; T dependence of hysteresis in magnetites, 88M/1528; two types of chem. RM during oxidation of magnetite, 88M/1523; Antarctica, Palmer Land, Black Coast, magnetic anomalies over, 88M/3138; Canada, Lake Superior, Michipicoten Is., volcanic rocks, palaeomagnetism, U-Pb geochronol., calibration of Keweenawan polar wander track,, 88M/2871; Michigan, Upper Peninsula, Portage Lake volcanics, palaeomagnetism, age of Cu mineralization, 88M/6460; Quebec, Sept-îles, layered mafic intrusion, 88M/3142; China, geomagnetic intensity evaluated from ancient pottery, 88M/1543; England, Derbyshire, Masson Hill, cave sediments, magnetostratigr., 88M/4788; Fennoscandian Shield, mafic dykes, palaeomagnetism, 88M/6457; Italy, Ivrea Zone, magnetic petrol. of deep crustal rocks, 88M/6458; Naples, Ischia, of volcanic island, 88M/1546; New Zealand, Auckland, Rangitoto Is., 88M/1545; Scotland, Gairloch, Kerry Road orebody, geophys. study, 88M/4786; Rhum, palaeomagnetism

of Torridonian, evidence for limited uplift of central intrusive complex, 88M/4785; Sweden, Eskilstuna, map-sheets, geol., interpn. of aeromagnetic maps, 88M/4376; Switzerland, Alps, metamorphic control of magnetic mineralogy of black shales, toward use of 'magnetic isogrades', 88M/3140

Magnetite v. spinel

 $\label{eq:magnetoplumbite-type} Magnetoplumbite-type & phase, Ba-\\ [Ti_3Cr_4Fe_4Mg]O_{19}, & new & upper-mantle,\\ struct., 88M/0272 & \\ \end{array}$

Magnetotactic bacteria, and magnetofossils in sediments, 88M/4787

Malachite, man-made jewellery, props., 88M/5516; Hong Kong, min. watch cases, descrptn., 88M/0585

- MALAWI, Chilwa Province, lithosphere metasomatism and petrogenesis of alkaline igneous rocks, carbonatites, 88M/4491; Junguni intrusion, peralkaline nepheline syenites, petrol., 88M/6182; N part of Chilwa alkaline province, petrochem., 88M/2797
- MALAYSIA, elimination of hydraulic effects for cassiterite concentrates in stream, 88M/0887; relationship between plasticity and physico-chem., micromorphol. props. of inland soils, 88M/0210; Pedu Dam, use of radioisotope tracers to identify location of seepage areas in dam, 88M/5880; Perak, Batu Gajah-Tanjong Tualang area, geochem. methods in exploration for primary tin deposits, 88M/0914

MALI, Adrar des Iforas, Pan-African belt, alkaline magmatism subsequent to collision, 88M/2799; Iforas granulitic unit, polycyclic two-stage corona growth in, 88M/6407; Kenieko, U behaviour in ferrallitic envts., 88M/2303

Manganaxinite v. axinite

Manganates, marine, thermal transformations in, 88M/2035

- Manganese, field detn. in sulphide materials by flameless AAS, 88M/4181; modelling of Mn cycling in two stratified fjords, 88M/5802; NW Atlantic, particulate Mn dynamics in Gulf Stream warm-core rings, surrounding waters, 88M/2400; Indonesia, particulate, Halmahera, Kau Bay,88M/5825; occurrence, Drammensfjord, Mn cycling in permanently anoxic fjord, 88M/5801; USA, Gulf of California, Guaymas Basin, geochem., 88M/4050; Wyoming, geol., occurrence of critical strategic metals, 88M/3563
- compounds, Mn-Na-dimetasilicate, struct. refinement, 88M/1797; oxides, crystal chem., new data, 88M/2616; hydrous, sorption, sorptive interaction of Cd, Zn on, 88M/5422; Finland, in groundwater treatment plants, 88M/1033; Papua New Guinea, Misima Is., structurally controlled epithermal mineralization assoc. with, 88M/5269; and hydroxides, sorption of Ni by, 88M/5421
- crusts, Central Pacific, morphol. of seamounts, implications for mining, 88M/5228; Pacific, US Exclusive Economic Zone, Horizon and S.P. Lee guyots, Co-rich, assessment of resources, 88M/3560

deposits, Australia, Groote Eylandt, Mn-carbonates in, 88M/2643; Brazil, Para State, Azul, lateritic, petrol., 88M/0393; India, Madhya Pradesh, Balaghat Dist., Ukwa, gondite from, 88M/4733; Turkey, review, 88M/3519; Wales, Harlech, Cambrian, genesis, diagenesis, 88M/1141

mineralization, France, Massif Central, Mont-Dore, 88M/0703

minerals, with tunnel struct., crystallochem.
 systematics, 88M/0270

- nodules, deep-sea, separation, detn. of U, Th in, new method, 88M/0085; deep-water, Au in, 88M/2290; separation, accumulation of Mn, Fe and formation of, 88M/4042; sources of Os isotopes in, 88M/5599; Australia, Tasman Sea, occurrence, 88M/0357; Indian Ocean, merlinoite in, 88M/1015; Central Indian Ocean Basin, assoc. sediments, mineralogy, 88M/0616; Pacific, rare and dispersed elems. in, 88M/0653; Central Pacific, observations, 88M/2995; equatorial and S.W. Pacific, REE, minor elem. distribn. in, 88M/2326; equatorial N Pacific, formation of, 88M/3518; equatorial N Pacific Ocean, Valdivia 13/2 area, distrib., geochem., 88M/0655
- ores, India, Orissa, Koira valley, Dengura, rutile in, morpho-chem., 88M/6050; Greece, Epidavros ophiolite sequence, genesis, 88M/6060; South Africa, Kalahari Mn field, Hotazel fm., quartz-free, physicochem. envts. for formation of, 88M/0347

Manganite, transformation of birnessite to, under mild hydrothermal treatment, exptl. study, 88M/0526

Manganostibite, new chem. data, relation to kolicite, holdenite, 88M/4307

Mantle v. Earth

Mapping, geological, geochem. of residual soils as aid to, statistical approach, 88M/0596

Maps, visualization of geochem. data on, new options, 88M/0595

- Marble, calcite, graphite crystals microscale isotopic zoning in, 88M/4063; Lewisian, geochem., 88M/2346; Greece, Xanthi area, Rhodope zone, corundum, zoisite-bearing, fluid phase compn., 88M/4724; Poland, Lower Silesia, Kłodzko region, microtextural segregation of min. phases in, 88M/3077; Spain, Arinteiro, and amphibolite, metamorphic interactions, 88M/4715; Madrid, Roman sculptures. petrog., 88M/6117; Taiwan, young, Pb/Pb dating, 88M/4903; USA, Virginia, Highland County, brucite-rich, occurrence, descriptn., 88M/6371; Zambia, Pan-African Zambezi belt, geochem., 88M/5752
- Marcasite, Belgium, from lead-zinc deposits, S isotopic geochem., 88M/3854; Italy, Ortiglieto, Marciazza, Cu-pyrite mineralizations, 88M/1882; USA, Illinois, occurrence, 88M/6478

Margarite, Australia, New South Wales, Lachlan Fold Belt, V-bearing, 88M/6034 Mariposite v. mica

Marls, corrected to hornblende compn., sodic-alkaline metasomatism, hydrothermal alteration, 88M/0490; France, Massif Central, Malines, Triassic, lithostratigr., tr. elem. distribn., 88M/3577

Marsturite, Italy, Genoa, Molinello mine, occurrence, 88M/3158

MARTINIQUE, Montagne Peleé volcano, shallow seismicity, 88M/4605

Mass transport, quasi-stationary state approximation to coupled mass transport and fluid-rock interaction in porous medium, 88M/3653

Materials science, phase diagrams in, use of computer in calculation, 88M/5346

Mawsonite, Canada, British Columbia, Maggie, in porphyry Cu deposit, 88M/1054

Mcbirneyite, El Salvador, Izalco volcano, new sublimate min. from fumaroles, 88M/2663

MEDITERRANEAN AREA, Alpine-Himalayan belt, tectonics, metallogeny, 88M/1885

MEDITERRANEAN SEA, and global ocean, V behaviour in, 88M/2381; entrainment of tr.-metal-enriched Atlantic-shelf water in inflow to, 88M/4091; late Quaternary sapropels, origin of organic matter in S7, 88M/0850; post-sedimentational processes in clayey deposits in internal seas, 88M/2982; Quaternary sapropels and assoc. sediments, organic geochem., palynology, 88M/5903; E, gelatinous pellicles in deep anoxic hypersaline basins, 88M/1419; E, Late Quaternary sediments, interstitial water studies, early diagenetic reactions, evaporitic salt influences, 88M/0825; E, marine min. 88M/3582, resources, 88M/3583; Bannock basin, brine formation, gypsum precipitation, 88M/1420; Gulf of Fos-sur-mer, Carteau Bay, hydrocarbons in water column, 88M/2426; Ligurian Sea. metal data treatment with multivariate statistics, 88M/4092; SE Coastal Plain, natural gas assocn. with water, oil, depicted by atmospheric noble gases, 88M/5905; Tyro basin, S, organic C contents in sediment cores, 88M/0793

Mélange, Chile, Chañaral, Palaeozoic, origin, 88M/6433

Melanovanadite, natural V bronze, crystal struct., chem., 88M/0269

Melanterite, Czechoslovakia, Nižná Myšľa, occurrence, anals., 88M/1056; Germany, Grube Clara, occurrence, 88M/4813

Melilite, crystal struct., 88M/5153

Melilitite, South Africa, Cape Province, petrol., relationship to kimberlites, 88M/1260

Melts, 2-D models for melt extraction at mid-ocean ridges and island arcs. 88M/1376; and crystals, glasses, especially in hydrous systems, calorimetric studies, 88M/0478; CaMgSi₂O₆, standard substance for conductivity measurements at T above 1500 K, 88M/0520; in system Na₂O-Al₂O₃-SiO₂, ultrasonic investigation. 88M/3690; in system Na₂O-FeO-Fe₂O₃-SiO₂, viscosities, 88M/3689; lab. evidence on behaviour of gold during mixing of basic and acid, 88M/5371; min. and melt physics, 88M/3655; multicomponent, development of models for, anal. of synthetic systems, 88M/3670; natural, evaporation in Knudsen chamber, 88M/3708; of system CaO-Al₂O₃-SiO₂, coordination of Al^{III} atoms in, 88M/0467; rock, compositional convection, layering in, 88M/0465; theory of melt segregation, review, 88M/2731; thermodynamics of mins. and, 88M/3654; viscosities in system

NaAlSi₃O₈–H₂O–F₂O₋₁, 88M/0479 —, albitic, solubility of CO₂ in, 88M/3739

—, aluminosilicate, detn. of mixing props. by Knudsen cell mass spectrometry, 88M/0477; water solubility in, 88M/5362

basaltic, exptl. detn. of solubility of CO₂ in, at low P, 88M/5373

, granitic, detn. of mixing props. by Knudsen cell mass spectrometry, 88M/0477 -, silicate, alkali, diffusive motion in, NMR study at high T, 88M/3691; and water-salt fluid at 900°C, 2 kbar, distribn. of petrogenetic elems. between, exptl. study, 88M/5389; fully polymerized, factors relative controlling viscosities 88M/3689; mafic-ultramafic, crystallization of, and change in solid phase compn. as function of T, grade of oxidation, 88M/5372; magmatic, relations between bulk compn., struct., props., 88M/0476; multicomponent, crystal growth, chem. diffusion, thermal diffusion in, 88M/0462; multicomponent, derivation of revised model for activity calculation in, 88M/5367; nature of P-induced coordination changes in, 88M/3652; P dependence of viscosity of, 88M/0471; spectroscopic evidence for P-induced coordination changes in,

Meneghinite, USA, California, Santa Cruz, Kalkar quarry, occurrence, 88M/3168

high T, P, 88M/3121

88M/5363; synthetic, natural, viscosity at

 jaskolskiite, member of meneghinite homologous series, crystal struct., 88M/3500

Mercury, detn. in natural waters, 88M/3284; geothermal exploration using surface Hg geochem., 88M/0893; Bay of Biscay, and France, Gironde Estuary, Hg concentrations in near shore surface water, 88M/0823; China, Wanshan Hg ore dist., sedimentary genesis of Hg substance, 88M/2172; Norway, Franvaren Fjord, in water, 88M/5805; tropical Pacific, gaseous, profiles, 88M/5836; USA, Colorado, Denver, envtl. influences on concns. in soil gases, 88M/4180; Hawaii, volcanoes and biogeol. of, 88M/2262; USSR, Pay-Khoy and N. Urals, black shale formations, Hg geochem., 88M/2308

-compounds, Hg₂Cl₂, Hg₂Br₂, simple device to produce single-crystals by sublimation,

88M/2059

deposits, gas-Hg aureoles above, 88M/0894
 ores, USA, California, New Idria mining dist., geochem., stable isotope studies, 88M/0670

pollution, USA, Ohio, Ashtabula, re-examination, 88M/0407

Merlinoite v. zeolite

Mesolite v. zeolite

Meta-eclogite, Italy, Antrona mafic-ultramafic complex, and Switzerland, Centovalli-Locarno region, ferrogabbroic and basaltic, petrol., 88M/3070

Metabasalt, France, Corsica, Monte San Petrone, recrystallization of eclogites in, 88M/1477; Italy, Western Alps, Val d'Ala, greenschist altered, petrol., min. data, 88M/1381; USA, California, Franciscan complex, alkaline, transitional subalkaline, geol., geochem., 88M/4425

SUBJECT INDEX

Metabasic rocks, Australia, New England, Palaeozoic fore-arc, petrogenesis, 88M/4404; Switzerland, Berisal crystalline complex, and ultrabasic rocks, petrol., Alpine metamorphic evolution, 88M/3067

Metabasite, Germany, Burgenland, Hannersdorf, comparative studies, 88M/0802; Iran, Deh-Bid-Bawanat, geochem., 88M/0805; Norway, S. Trøms, Grønfjellet nappe, petrogr., geochem., 88M/3038; Poland, Sudetes, NW part of Snieżnik metamorphic unit, petrol., 88M/4727; Spain, Betic Cordilleras, Nevado-Filabride complex, geochem., relics of ophiolitic sequence, 88M/2207; Sweden, Bergslagen, Saxå rift basin, Proterozoic, formation of sulphide deposits, relation to sodic, potassic alteration of, 88M/0338; USA, California, Cazadero, amphiboles from Franciscan jadeite-glaucophane type facies, parageneses, compns., 88M/0993; USSR, Sal' nye tundras, Laplandian granulitic belt, petrochem. features, origin, 88M/1389

Metadiabase dykes, high TiO₂, USA, New York and New Jersey, Hudson Highlands, poss. late Proterozoic rift rocks in New York recess, 88M/6423

Metadolerite, *Norway, Tromso, Senja nappe*, Caledonides, geochem. evidence for rift-related origin of, 88M/1229

Metadunite, serpentinized, Greenland, Isua supracrustal belt, shandite, in, 88M/1052

Metagabbro, Czechoslovakia, Rochovce, borehole KV-3, and amphibolites, Slovenské Rudohorie Mts., Hladomorna Valley fm., comparative min.-petrogr. characteristics, 88M/6403; France, Massif Central, Rouergue, undeformed, reaction sites in, 88M/0702; India, Bihar, Mathurapur, and assoc. basic rocks, petrol., geochem., 88M/2857; Italy, Finero, retrograde trend in, 88M/3069

Metagranite, New Zealand, Stewart Is., tarpaulin, (new name), occurrence, 88M/4751; Pyrenees, late Precambrian, major elem. geochem., 88M/3937

Metaharzburgite, Switzerland, Valle Verzasca, Cima di Gagnone, metasomatic veins in, 88M/3809

Metakaolinite v. clay minerals, kaolinite

Metal, direct polarographic recording of metal elimination from aquatic samples by coprecipitation with ferric hydroxide, 88M/0423; hcp, development of texture, elastic anisotropy during deformation of, 88M/6441; in mafic, ultramafic rocks, mobilization, 88M/1847; metal ion complexation measured by anodic stripping voltammetric methods, interpn., 88M/0086; O fugacity, tin behaviour in, 88M/3694; pollution assessment of marine envt. by detn. of metal-binding proteins in *Mytilus* sp., 88M/3629; speciation in oceans, 88M/2362; stratiform Cu deposits hosted by

low-energy sediments, aspects of metal transport, 88M/0625; supercritical fluid extraction from selected mins., 88M/0485; surface characterization using variety of techniques, 88M/4920; Czechoslovakia, Malé Karpaty Mts. metamorphic zones, alkali and alkaline earth metals in crystalline schist, 88M/2353; Red Sea, Atlantic II Deep, remobilization at spreading centre, Pb isotope study, 88M/5587; USSR, Azerbaijan, in bituminous rocks, 88M/0769

—, base, Australia, Tasmania, Mt. Read volcanics, exploration, Pb isotope signatures, genetic implications, 88M/0649; Canada, Atlantic Provinces, Windsor (Codroy) group, in oolitic, stromatolitic limestones, 88M/2332; USA, central Appalachia, in Fe-rich rocks of Proterozoic—early Palaeozoic rift setting, 88M/0360

deposits, base and noble, hypothesis for, 88M/3510; on deep sea-bed, classification, distribn., 88M/0299; Algeria, Ain Barbar, polymetallic ore veins, min. compn., fluid phase evolution, 88M/5586; Australia, Thalanga, Dry River and Mt. Chalmers, base, Pb isotope data, bearing on exploration, ore genesis, 88M/2175; China, Guangdong province, Dabaoshan, polymetallic deposit, genesis, 88M/3597; France, Massif Central, Les Borderies, polymetallic vein, min., isotopic evolution, 88M/3889; Greece, Peloponnesus, Argolis Peninsula, oxides, Mesozoic, ocean ridge origin, tectonic setting, 88M/1883; India, Malanjkhand and Zawar, geomicrobiol. as aid to prospecting, 88M/5928; Korea, hydrothermal, compositional variation of sphalerites from, 88M/1050; Papua New Guinea, Pt-group, exploration techniques, 88M/5930; Portugal, Baixo Alentejo, Montemor-o-Novo-Casa Branca, exploration, 88M/1881; USA, Cascades, Wind River gold prospect, precious, geochem., geol., 88M/2482

-, heavy, effect of sample pretreatment on reliability of solid speciation data of, implications for study of early diagenesis, 88M/4022; in marine envt., anals., 88M/4075; 'ion exchange-precipitation' isotherm of, —deBoer-Zwikker equation treatment, 88M/2024; release of, from harbour's sediment to sea-water, lab. study, 88M/4037; China, W. Hunan, in soils in sub-tropical zone, distribn., status, 88M/2317; Italy, Naples, Porto di Bagnoli, pollution study in bottom sediments, 88M/0409; Ligurian Sea, in sea-water, data treatment with multivariate statistics, 88M/4092; *Pacific*, processes controlling distribn. in ferromanganese nodules, crusts, 88M/3517; Scotland, Loch Etive, in coastal sediments, geochem. assocns., postdepositional mobility, 88M/2297; Spain, Cantabria, Suances estuary, pollution, 88M/5322; USSR, Karelia, Yalguba, in variolites, 88M/2233; Yugoslavia, Krka River Estuary, distribn. in recent sediments, example of sequential extraction anal., 88M/3627

- mineralization, detn. of anions by ion chromatogr., application to pedogeochem. exploration for, 88M/2499; introduction to remobilization, information from ore-body geometry, exptl. considerations, 88M/1849; mechanical, chem. (re)mobilization, introduction to special issue, 88M/1843; mobilization, remobilization, principles, 88M/1846; ubiquity, inter-dependence of (re)mobilization systems, 88M/1844: Antarctic Peninsula, 88M/5233; Australia, Victoria, North Mammoth Prospect, polymetallic Sn-Cu-Ag-Au-Pb-Zn vein, lithogeochem. exploration, 88M/0873; Germany, Kupferschiefer-type, alteration zones around, 88M/2155; Japan, Tungsten Province, base, precious, K/Ar dating, 88M/1631; Scotland, Southern Uplands, epithermal base metal vein, nature, origin of fluids, 88M/3525
- —, noble, Canada, Ontario, Alexo, and Colombia, Gorgona Is., abundances in komatiite suites, 88M/2272
- ore, prelim. fractionation patterns of, through Earth history, 88M/5579
- oxides, theory of electronic structs. of chemisorption on oxide surfaces, 88M/5131
- --, precious, guide to successful heap leaching, 88M/0283; permeability to hydrogen at 2 kbar total *P*, elevated *T*, 88M/0427
- speciation, in water, soil, sediments, anal., effects of, (book), 88M/4961
- -, trace, adsorption modelling, particle-water interactions in estuarine envts., 88M/4087; marine sediments, intercalibration exercise for, 88M/5936; in natural waters, two column method for preconcentration of, on acrylate resin, 88M/1690; in sea-water, Teflon sampler, 88M/1681: new preparation, characterization, ageing of δ-MnO₂, for use in speciation studies, 88M/2034; Adriatic Sea, in selected organisms, 88M/3630; China, Xiamen harbour, concn., distribn. in surface waters, 88M/3634; eastern North Sea, flows of Cd, Cu, Hg, Pb, Zn through coastal area, 88M/4082; Scotland, Firth of Forth, influence of inputs to on tr. metal concn. in coastal waters, 88M/1955
- —, transition, calculations of Hugoniot P, P derivative of bulk modulus for, 88M/4792; complex compounds, applications of atomic-orbital methods to struct., props. of, 88M/5076; control effect of, in carbonate geochem., 88M/3979; mobility in oceanic ridge crest hydrothermal systems at 350°C-425°C, 88M/3811; Japan, Minamidaitojima Is., geochem. behaviour during formation of protodolomite, 88M/5722
- veins, USA, Idaho, Montana, Belt basin, base-, precious-, metamorphic origin, 88M/5607
- Metallogenesis, review, 88M/3514; Pacific Ocean, Wilkes Fracture Zone-E. Pacific Rise Intersection, hydrothermal, 88M/5731
- Metallogenic formations, *Europe*, Cretaceous, in platform and adjacent areas, 88M/1872
- Metallogeny, E. Asia, of deep zones in islandarc systems, 88M/5187; *India*, concepts, constraints, prospects, 88M/3551

- Metamorphic complexes, high-grade, geochem. diagnosis of original rocks in, 88M/2351; *Italy, Calabria–Peloritani*, high-grade, peraluminous leucocratic rocks, 88M/4056
- differentiation, thermodynamic model for grain interfaces, insights on nucleation, rock textures and, 88M/3795
- environments, high-grade, remobilization in, 88M/1854; textural evidence for remobilization in, 88M/1853
- facies, Greece, Cyclades, Sifnos, transformation of blueschist to greenschist facies rocks, consequence of fluid infiltration, 88M/6401
- —, blueschist facies, *Asia*, poss. periodicity of blueschist facies metamorphism, 88M/6374
- —, eclogite facies, in lower continental crust, 88M/1116
- —, granulite facies, *India, Peninsular gneiss complex*, regional geothermobarometry, 88M/3097
- —, granulite facies rocks, Western Australia, Albany, Precambrian, high-T retrograde adjustments in, 88M/3106; China, Shandong province, Laixi-Pingdu area, characteristics, 88M/3100; Japan, Hokkaido, Hidaka metamorphic belt, P-T condns., 88M/3102; South Africa, S. marginal zone of Limpopo Belt, fluid inclusions in, 88M/5546
- fluids, Al speciation in, 88M/3799; in subduction zones, thermal effects, 88M/4682; principal volatile components, min. inclusion data on characteristics of, 88M/0691; supercritical, min. solubilities, speciation in, 88M/3669; Greece, Cyclades, metamorphic events, 88M/3804
- geology, recent advances, review, 88M/4688
- minerals, anisotropy of magnetic susceptibility of, 88M/3130
- rocks, high-grade, from lower continental crust, geochronol., related isotope geochem., 88M/1117; peraluminous, pre- or synmetamorphic metasomatism 88M/3798; China, Sichuan Province, Miyi, low-P terrain, Precambrian 88M/4742; France, Dôme de l'Agout, ammonium-bearing micas in, 88M/0602; Greece, Hellenides, Paikon series, high-P, low-T, from island arc, 88M/3076; Kilkis province, Serbomacedonian massif, stream, soil geochem. survey, 88M/2465; Hungary, Aggtelek-Rudabánya Mesozoic. mts.. diagenesis, regional metamorphism, 88M/3082; Danube-Tisza interfluve. crystalline basement, petrogr., 88M/3081; Sopron region, leuchtenbergite-bearing, genesis, 88M/3083; Tiszántúl, Körös — Berettyó and Álmosd units, 88M/3079; India, Garhwal Himalaya, Crystallines, geothermobarometry, 88M/4736; Himachal Himalaya, Central Crystalline rocks, geol., tectonic setting, 88M/4735; Japan, Tateyama-gawa, Hida, metamorphic T estimated by cordieritegarnet, garnet-biotite geothermometry, 88M/4743; Pakistan, Malakand Agency, mineralogy, Proterozoic, 88M/3086;

- Scotland, Gruinard Bay, Scourian complex, magmatic evolution, 88M/3050; Scourian complex, geochem., petrogenesis, tectonic and 88M/3049: Sutherland models, Scaraben area. lithol., Caithness, Menderes Massif, 88M/6384; Turkey, origin, evolution, Rb/Sr, O isotope study, 88M/4057; USA, Wyoming, evidence for inverted metamorphic gradient assoc. with Precambrian suture, 88M/4758; USSR, N. Atsgarinskii sheet, petrol., Caucasus, 88M/1490
- systems, geochem. applications of phase rule, phase diagrams in, 88M/0441
- terrains, Scotland, Inner Hebrides, Colonsay Limestone, value of chemostratigraphical correlation in, 88M/0798
- Metamorphism, and crustal rheology, implications for structl. development of continental crust during prograde metamorphism, 88M/1111; fluid exchange between reacting bodies of rock during, 88M/3794; immiscible fluids implications of two-phase flow for reaction history, 88M/6357; low T, (book), 88M/3333; significance of grain-scale stresses in kinetics of, 88M/6375; Western Alps, unsolved problems, 88M/3058; France, Brittany, Champtoceaux nappe, eclogitic, in Hercynian chain, 88M/6389
- —, contact, role in producing U mineralization, 88M/2342
- —, crustal, thermodynamic models of molecular fluids at elevated *P*, *T*, 88M/3668
- —, granulitic, CO₂, melts and, 88M/1466; USSR, Olekminskaya folded zone, early Archaean, 88M/3093
- —, high-grade, evidence for movement of ore materials during, 88M/1852; Canada, Labrador, Saglek-Hebron, late Archaean, and granite injection on early Archaean gneisses, chem., isotopic effect, 88M/1120; Scotland, Scourie complex, causes of, 88M/3051
- —, low-grade, Welsh Basin, Lower Palaeozoic succession, example of diastathermal metamorphism, 88M/6360; Ecuador, Western Cordillera, Macuchi fm., and geotectonic setting, 88M/3119
- —, regional, in simple overthrust terrains, two-dimensional modelling of *P-T*-time paths of, 88M/4689; *Hungary, Little Plain*, E. Alpine type Palaeozoic basement, min. assemblages, illite crystallinity, -b_o, coal rank data, 88M/6406; *USA*, *S.-centrain Maine*, contrasting mechanisms of fluid flow through adjacent stratigraphic units during, 88M/5759; *USSR*, *Great Caucasus*, *Sophian uplift*, evolution of, 88M/3094
- -, very low-grade, correlation betweer indicators of, 88M/4681; fluid inclusior studies during, 88M/4679; of clastic sedimentary rocks, 88M/4676; of volcanic volcaniclastic rocks, min. assemblages, min facies, 88M/4677; organic material and 88M/4678; radiogenic isotopes in 88M/4680; Alps, review, 88M/3057

Metaophiolites, *Italy, Western Alps, Susc Valley*, basaltic, gabbroic, geochem. 88M/2213 Metapelite, behaviour of F in, during metamorphism near gabbro intrusion, 88M/3026; high-P mins., min. assemblages in, metamorphism of crustal rocks at mantle depths, 88M/4719; Canada, Rocky Mts., Selwyn Range, low-grade, empirical garnet-muscovite geothermometry in, 88M/6421; France, Massif Central, Najac-Carmaux klippe, new outcrop of high-P metamorphism, 88M/4710; Germany, Rheinisches Schiefergebirge, within anchizonal terrain, K/Ar dating, 88M/1617; India, Himachal Himalaya, Jutogh, petrol., 88M/4734; Italy, Maritime Brianconnais, Permian. danburite-bearing mineralizations 88M/0986; Western Alps,high-P, zoneography, chronol., consequences, 88M/3060

Metasedimentary rocks, iron sulphides in, isotopic support for retrogressive pyrrhotite to pyrite reaction, 88M/3991; Austria. Tauern Window, Grossvenediger, high-P min. assemblages, breakdown-products in, 88M/3064; Finland, provenance, Sm-Nd isotopic study, 88M/3042; Greenland, Isua supracrustal belt, clastic, petrol., REE geochem., 88M/3032; E. Greenland, Krummedal supracrustal sequence, Proterozoic, stratigr., 88M/4361; Nigeria, Oban Massif, Uwet area, geochem., 88M/4058; Pakistan, Azad Kashmir, Barian-Kundul Shahi area, petrogr., 88M/3098; Scotland, Glenfinnan and Loch Eil divisions of Moine assemblage, Proterozoic, stratigr., 88M/4357; South Africa, Natal, carbonate, Sr isotopes in, constraints on formation of Natal Structural and Metamorphic Province, 88M/5753; Spain, U ore occurrences in, 88M/3530; Trinidad, Northern Range, low-grade, min., metamorphic geol., 88M/6432; USA, Alabama piedmont, northern, piedmont, O, C isotope distribus., 88M/4529 Metasomatic fluids, mantle, solubility of major, tr. elems. in, exptl. constraints,

— processes, application of moderation theorems to, 88M/3796; chem. transport in, (book), 88M/3327; USSR, Armenia, Megradzorskoe deposit, 88M/4686

88M/3012

88M/3010; Uganda, in spinel lherzolites,

alkali clinopyroxenites, characterization,

— wall-rock associations, high-T, 88M/6358 Metasomatism, advective, 88M/3792; alkali, and formation of iron deposits, geochem. mechanism, 88M/5583; Ca-K, in system CaO-K₂O-MgO-Al₂O₃-SiO₂-H₂O,

88M/3812; diffusion, induced stress, secondary mass transfer, thermodynamic basis for tendency toward constant-vol. constraint in, 88M/3797; diffusion-limited, small-parameter method applied to model for, in presence of reversible reactions, 88M/5348; in spinel lherzolite xenoliths, min., geochem. evidence for differing styles of, poss. enriched mantle source regions of basalts, 88M/3011; involving fluids in CO₂–H₂O–NaCl, 88M/3793; Lagrangian and Eulerian representations of metasomatic alteration of mins., 88M/3806; pre- or

synmetamorphic, in peraluminous metamorphic rocks, 88M/3798; *Iceland*, hydrothermal alteration, remelting of oceanic crust, 88M/3801; *Switzerland*, hydrothermal alteration of Variscan granite, magmatic autofault related vein metasomatism, 88M/3808; *USSR*, *Gornyi Altai*, *Sinyukhinskoe ore area*, skarn formation and, 88M/4687

-, mantle, and alkaline magmatism, (book), 88M/3334; and carbonatites, exptl. study of complex relationship, 88M/4419; (book), 88M/1707; fluidized CO2-sulphide-silicate media as agents of, 88M/1272; model, 88M/4416; perspective, prospect, 88M/2783; processes of, constraints from observations of composite peridotite xenoliths, 88M/4417; Rb/Sr, Sm/Nd ratios, implications for role in petrogenesis of Na₂O-rich alkaline basalt, 88M/4422; W Victoria, Cr-diopside Australia, lherzolites, pyroxenites, isotopic geochem., 88M/3957; metasomatic processes in Cr-diopside lherzolites, 88M/3956

Metasomatites, alkaline-earth metal apobasic, Rb, Cs distribn. characteristics in mins. of, 88M/0728; and related ore deposits, simulation expt. on Fe source in formation of, 88M/0454; min. facies of, related to regional metamorphism, 88M/4690; rare-alkaline-metal, of pegmatite fields, min. parageneses, anal. of min. equilibria in, 88M/3678; USSR, Inagli, struct., compn., 88M/1270

Metatuffs, Germany, Rheinisches Schiefergebirge, within anchizonal terrain, K/Ar dating, 88M/1617

Metaturbidites, Canada, Slave Province, Yellowknife Bay, Archaean, succession of quartz veins in, 88M/1180

Metavolcanic rocks, Canada, Quebec, central Noranda area, Archaean felsic, geochem., origin, 88M/5666; Egypt, Eastern Desert, Hamata talc mine, and mineralization, geochem., Finland, Outokumpu assemblage, nature, affinities, significance, 88M/3047; Tampere schist belt, early Proterozoic, geochem., tectonomagmatic affinities, 88M/3048; New Zealand, Croisilles and Patuki, geochem., implications for early Permian subduction polarity, 88M/5656; USA, Carolina slate belt, U/Pb, Th/Pb whole-rock isochrons, 88M/3251

Metavoltine, *Italy, Tuscany, Cetine mine*, occurrence in oxidation zone, 88M/1059

Allende, 88M/0946, 88M/0947, 88M/0948,

88M/0949, 88M/2521, 88M/4218, 88M/5959 Bishunpur, 88M/0936

Bouvante, 88M/0943 'Dunedin', 88M/5967

Elephant Moraine A79001, 88M/4228,

88M/5955, 88M/5956, 88M/5957, 88M/5958 Kainsaz CO3, 88M/5978

Leedey, 88M/0944 Leoville, 88M/0948

Murchison, 88M/0954, 88M/2525, 88M/2526, 88M/5960

Murray, 88M/4224, 88M/4225 Okhansk H4, 88M/5978 Olivenza, 88M/2523

Ornans, 88M/4217

Saratov L3-4, 88M/5978 Semarkona, 88M/0950 Vaca Muerta, 88M/2531 Washington County, 88M/2534 Yamato, 88M/0937, 88M/0938, 88M/0939, 88M/0940, 88M/0941, 88M/0942 Yamato-74013, 88M/0959 Youndegin, 88M/2532

Meteorites, alteration of Al-rich inclusions inside amoeboid olivine aggregates in Allende, 88M/0946; anal. of chondritic interplanetary dust thin-sections, 88M/5977; and asteroids, Apollo-Amor objects, dynamical relations between, 88M/5985; and cosmic dust grains, stable isotope measurements, 88M/5984; C isotopic compn. in EETA 79001, relation to parent body volatiles, 88M/5957; C, O, N isotopic compns. of poss. Martian weathering products in EETA 79001, 88M/5956; Ca-sulphate of poss. Ca-carbonate, extraterrestrial origin in EETA 79001, 88M/5955; carrier phases for I in Allende, and assoc. 129 Xe_r/127 I ratios, laser microprobe study, 88M/5959; 'domestic' origin of opaque assemblages in refractory inclusions, 88M/4221; further find from Youndegin meteorite shower, 88M/2532; heavy C in oxide grains from Murchison, interstellar molecules, 88M/5981; interstellar polycyclic aromatic hydrocarbons and C in, 88M/0956; isotopic anomalies of Ne, Xe, C in, interstellar diamond and SiC, carriers of exotic noble gases, 88M/5962; isotopic anomalies of Ne, Xe, C in, local, exotic noble gas components and interrelations, 88M/5963; isotopic anomalies of Ne, Xe, C in, separation of carriers by density, chem. resistance, 88M/5961; isotopic studies of Mg, Fe, Mo, Ru, W in Fremdlinge from Allende refractory inclusions, 88M/4218; large heterogeneous 26Mg excesses in hibonite from Murchison, 88M/0954; magnetism of, 88M/5976; nucleosynthesis contribns. to solar nebula, 88M/5980; O isotopes in refractory stratospheric dust particles, proof of extraterrestrial origin, 88M/2518; Olivenza, magnetic props., implications for evolution, early Solar System magnetic field, 88M/2523; origin of ferrous zoning in Allende chondrule olivines, 88M/0947; petrogenesis of sulphide-rich Fremdlinge, constraints on solar nebula processes, 88M/4219; primitive, local and exotic components of, and origin, 88M/5982; refractory-metal-rich assemblages from Ca, Al-rich inclusion in Allende, compn., mineralogy, 88M/2521; registration-T dependence of heavy-ion track-etch rates, annealing sensitivity in crystals, implications for cosmic ray identification, fission track dating, 88M/4229; relation between 40Ar/39Ar 88M/4229; relation between collisional ages and meteorite type, 88M/4233; S-process Kr of variable isotopic compn. in Murchison. 88M/5960; thermodynamic parameters, formation condns. for heideite in, 88M/5979; with terrestrial-like D/H ratio, H isotope abundances, 88M/0952; Yamato (A), (B), (C), (D), cosmo-chem. studies, summary,

88M/0938; Yamato, magnetic props., 88M/0942; Yamato, mineralogy, 88M/0939; Yamato, petrol., 88M/0940; Antarctica, I-overabundances in, geochem. study, 88M/2524; S. Pole, atmospheric Ir as of meteoritic component, 88M/2535; Yamato Mts., note on those collected in December 1969, 88M/0937; Greenland ice cap, characteristics, mass distribn, of extraterrestrial dust from, 88M/0955

-, achondrites, dynamic synthesis of diamond from heptadecane, exptl. study, 88M/0962; stress-induced transformation of pigeonites from, 88M/5970; Yamato (B), bronzite, chromite in, crystallographic, chem. studies, 88M/0941; *Antarctica*, isotop anomalous ¹⁹⁶Hg, ²⁰²Hg in, 88M/4231 isotopically

-, chondrites, chondritic interplanetary dust particles, mineralogy, 88M/2517; discovery of scapolite in Bishunpur, 88M/0936; EH-, normal, reverse zoning in niningerite, novel key parameter to thermal histories of, 88M/5966; fractionation processes in early solar system, 88M/2530; compositional evidence regarding origins of rims on Semarkona chondrules, 88M/4211; microdistribns. of Mg isotopes, REE abundances in Type A inclusion from Efremovka, 88M/4215; unequilibrated, H isotope abundances, 88M/0951; China, noble gases, 81Kr-Kr ages, 10Be, 88M/2520

- -, --, carbonaceous, aqueous alteration in, mass balance constraints on matrix mineralogy, 88M/2527; chondrule compns. in Kainsaz CO3, 88M/5978; evidence for interstellar SiC in Murray, 88M/4224; isotopic characterization of kerogen-like material in Murchison, 88M/2525; isotopic compn. of Ru in Allende, Leoville, 88M/0948; large isotopic anomalies of Si, C, N, noble gases in interstellar SiC from Murray, 88M/4225; nature, origin of interstellar diamond from, 88M/5964; O, H isotope relations in water, acid residues, comment, 88M/4222, reply, 88M/4223; origin of type C inclusions from, 88M/5954; Ti isotopic anomalies in chondrules, 88M/4216; variations in H isotope compn. in. 88M/4220
- -, L3, fine-grained aggregates in, 88M/4230
- -, —, L6, shock effects, Ar loss in samples of Leedey, exptl. study, 88M/0944
- -, --, LL, I-Xe systematics in, 88M/5969; New Zealand, 'Dunedin', LL-3, anals., 88M/5967
- -, ordinary, chondrule compns. in Okhansk H4 and Saratov L3-4, 88M/5978; first recorded occurrence of smectite in, implications, 88M/0950
- -, -, type 3, origin of iron-rich olivine in matrices of, exptl. study, 88M/4212; chem., phys. studies, thermoluminescence, hydrothermal annealing expts., relationship to aqueous metamorphism, alteration. 88M/4214; chem., phys. studies, thermoluminescence, metamorphism, 88M/4213: review, 88M/2519
- -, chondrules, matrix in Ornans, poss. precursor components, 88M/4217; matrix,

- coarse-grained chondrule rims in Allende, origin, interrelationships, poss. precursor components, 88M/0949
- -, craters, Germany, Ries Crater, chem. record of projectile in graded fall-back sedimentary unit from, 88M/5994
- -, diogenite, Yamato Y-74013, thermal, redox history, 88M/0959
- enstatite. CaS in, tr. elem. chem., implications for origin, 88M/2522; differences in isotopic compn. of carbonaceous components in, 88M/5968; ¹²⁹I/¹²⁷I variations among, 88M/4226; origins of mins. in, 88M/4227; sulphidation of Mg-rich olivine, stability of niningerite in, 88M/0945
- -, eucrites, France, Bouvante, chem., petrol., mineralogy, 88M/0943
- -, impacts, bolide, acid rains, biospheric traumas at Cretaceous-Tertiary boundary, 88M/0964; global tr.-elem. biogeochem. at Cretaceous-Tertiary boundary, ocean, biotic response to hypothetical impact, 88M/4239; new Early Jurassic tetrapod assemblages constrain Triassic-Jurassic extinction event, 88M/0966; origin of moldavites, 88M/0963; rock magnetic signature of Cretaceous-Tertiary boundary, 88M/4237; terrestrial impact structs., 88M/0968; Antarctica, new types of spherules, poss. impact origin, 88M/4236; N., Atlantic, identification of underwater extraterrestrial impact crater, 88M/0967; Australia, Queensland, Lawn Hill circular struct., shatter cones, presumed astrobleme, 88M/5997; Czechoslovakia, Ševětín astrobleme, geol., 88M/5995; Ries crater, shock-wave Germany, feldspar deformed grains from. characterization, 88M/1008; USA. Wyoming, new Cretaceous-Tertiary boundary clay site, 88M/4238; USSR, Khazakhstan, Zhamanshin crater, blue glass, new impactite variety, 88M/5996; Zhamanshin crater, petrochem, types of impact melts, 88M/4235 -, iron, ²⁶Al, ¹⁰Be production in, 88M/5972;

Cu, Ni partitioning in, 88M/2533; evaluation of methods to determine cooling rates of, 88M/5974; low T phase transformations in metallic phases of, 88M/5975; Ru, Re, Os, Pt, Au in, 88M/0958; solar compn. noble gases in Washington County, 88M/2534; variable ¹⁹⁰Os/¹⁸⁴Os ratio in acid residues of,

88M/4232

-, mesosiderites, compositional differences between basaltic, gabbroic clasts in, 88M/5973; diverse eucritic pebbles in Vaca Muerta, 88M/2531

- -, shergottites, lab. shock emplacement of noble gases, N, CO₂ into basalt, implications for trapped gases in EETA 79001, 88M/4228; Antarctica, terrestrial ¹⁴C age of EETA 79001, 88M/5958
- —, SNC, large crater origin of, 88M/0957
 —, stony, production of ¹⁰Be in, compn. dependence, 88M/4210
- -, stony-iron, low T phase transformations in metallic phases of, 88M/5975
- -, ureilites, formation by nebular processes, 88M/5971; noble-gas enrichment in vapour

growth diamonds in, 88M/0953; origin, evolution of parent magmas, multi-stage igneous activity on large parent body, 88M/2529; polymict, ¹⁵N-enriched N in, bearing on formation, 88M/4234; tr. elem. clues to origin, 88M/2528

Methane v. hydrocarbons

MEXICO, ceramic materials, archaeometric study, 88M/4860; lower crustal xenoliths, Nd-Sr isotope compn., evidence for origin of mid-Tertiary felsic volcanic rocks, 88M/6221; mantle xenoliths, occurrence, 88M/2737; palaeomagnetism, tectonics, 88M/4857; Proterozoic, Phanerozoic basement terrains, Nd isotopic studies, 88M/6142; E and S, Precambrian crust formation, metamorphism, Sm/Nd dating, 88M/0044; Baja California, Cainozoic volcanic rocks, geochem., implications for petrogenesis of post-subduction magmas, 88M/0685; continental margin, tectonics, 88M/4855; Vizcaino Peninsula, granitic clasts in Mesozoic arc-derived strata, U/Pb 88M/0042; W.-central Baja dating, California, metamorphic petrol. of high-P, low-T subduction complex, 88M/6431; Chiapas, El Chichón Volcano, eruptive products, XRF anals., inter-lab. comparison, 88M/2509; 1982 eruption, tephra, heavy min. study, 88M/4602; Colima volcano, pyroclastic flows, petrol., 88M/1365; Durango, Mapimi, ogdensburgite, new data, 88M/1040; Guadalcazar, decrepitometry of fluid inclusions in quartz from granite, principles, application to min. exploration, 88M/3523; Iztaccíhuatl volcano, laserinterferometry study of oscillatory zoning in plagioclase, record of magma mixing, phenocryst recycling in calc-alkaline magma chambers, 88M/4276; Los Azufres geothermal field, volcanic rocks, geochem., 88M/1364; Mexican Volcanic Belt, igneous rocks, geochem., 88M/1363; morpholog., structl. model, 88M/1361; present knowledge, problems, 88M/1366; Mexican Volcanic Belt, central sector, morpholog., structl. model, 88M/1362; Michoacán-Guanajuato volcanic field, struct., 88M/2919; Poza Rica trend, Cretaceous, evolution of pore space, 88M/6355; Sierra Madre Occidental and Mexican Volcanic Belt, volcanic rocks, synthesis, comparison of geochem., 88M/0750; Sierra Peña Blanca, U concentration mechanisms in volcanic envt. during hydrothermal processes, 88M/2280; Sonora, iridescent andradite, gem notes, 88M/5518; Sonora, El Correo, tr.-elem. variation in hydrothermal tourmalines assoc. with mineralization, 88M/2488; Trans-Mexican Volcanic Belt, age, evolution, 88M/0043

Mica, choice of calculating scheme of mica formula, 88M/4266: interstratified dioctahedral mica/smectites, distribn. of Ca, Na ions in, 88M/4987; introduced into forest soils, weathering of, 88M/0190; new synthetic silicate with charged mica-type layers, characterization, props., 88M/0562; polytypism in, polyhedral approach to energy calculations, 88M/5107; smectite/mica, syntheses

inter-layer

genesis,

H, O in, 88M/2131

of

cations

Switzerland, Lake Constance, excess K-Ar

ages of glauconite from Upper Marine

Molasse, evidence for glauconitization of,

88M/4273; USA, Alaska Range, Ba-rich,

occurrence, 88M/2584; Nevada, White Pine

County, from metaclastic rocks, chem.,

stable-isotope data for, 88M/6028; USSR,

Karelia, Yatulia sediments, hydrous,

kimberlites, IR spectra, isotopic compn. of

, biotite, aluminous, exptl., kinetic study of

breakdown at 800°C: reaction microstructs.,

min. chem., 88M/2072; and chlorite, Sc

partition between, as indicator of

crystallization T, 88M/0604; cation ordering

in, studied by X-ray photoelectron

diffraction, 88M/3465; chlorite-biotite-

muscovite geobarometer, recalibration,

88M/0558; exptl. study of reaction biotite +

3 quartz = 3 orthopyroxene + K-feldspar +

water, 88M/5388; geochem. features,

88M/5557; in igneous rocks, crystal chem.,

88M/4267; kaolinitization of, TEM data,

implications for alteration mechanism,

88M/0139; magnetic interaction in,

88M/5020; Yakutia,

in,

88M/6030;

interstratified

mins.. -, glauconite, correlation of local envts. of Fe 88M/4981; synthetic, ²⁹Si MAS-NMR ions with compn., age of, 88M/5116; Fe spectroscopy, observed, predicted distribn. substitution by of tetrahedral Al-Si, 88M/5114; SW spectroscopy, 88M/0147; ferromagnetic or England, Cornubian batholith, trioctahedral, antiferromagnetic Fe III spin configurations compns. of, 88M/4270; France, Beauvoir, in, 88M/5108; form, function, (book), evolution of mica compn. in granite, 88M/1705; Mössbauer spectra, 88M/1807; 88M/4269; Dôme de l'Agout, ammoniumorigin of, 88M/2957; Angola, mouth of bearing, in metamorphic rocks, 88M/0602; Congo, elem. migration, min. genesis, Échassières, Beauvoir, three stages of 88M/2305; Austria, Salzburg, in sandstone, development in granite, 88M/4268; condns. of formation of, 88M/2586; China, Greenland, Archaean Isua and Malene Jilin province, Xiaoyanggiao area, in supracrustal rocks, green, occurrence, Cambrian-Ordovician profile, min. study, 88M/2582; Japan, Ryoke and Sanbagawa 88M/6033; Poland, Wieluh region, belts, from low- to middle-grade epigenetic glauconite-smectite from Jurassic metamorphic rocks, non-stoichiometry of

> -, lepidolite, cation ordering in, studied by X-ray photoelectron diffraction, 88M/3465; heterogeneous, epitaxial nucleation of protein crystals on min. 88M/6031; Norway, Tørdal, complex stacking sequences in, 88M/3466; USA, Maine, Topsham, occurrence, 88M/4830

sediments, 88M/3404; Switzerland, Lake

Constance, from Upper Marine Molasse,

excess K-Ar ages, evidence

glauconitization of mica, 88M/4273

SUBJECT INDEX

⁵⁷Fe

Mössbauer

, lepidomelane, USSR, Kola peninsula, Iokan'gskii massif, in granite, petrol., 88M/1267

mariposite, France, Savoie, conglomerates, 88M/6115

-, muscovite, + quartz, metastable melting during breakdown of, at 1 kbar, 88M/1994; 2M₁, synthesis of Rb analogue of, 88M/0559; chlorite-biotite-muscovite geobarometer, recalibration, 88M/0558; dehydroxylation: high-T studies, 88M/0560; electric-field gradient in, 88M/0256; K-feldspar + water, growth kinetics, mechanism, 88M/5393; synthetic, solid solutions in system K₂O-Al₂O₃-SiO₂-H₂O, 88M/0557; France, Massif Armoricain, Vendée, chem., min. evolution of, in vicinity of biotite isograd during prograde metamorphism, 88M/6388; Greenland, Archaean Isua and Malene supracrustal rocks, barian-chromian, occurrence, 88M/2582; Poland, Lower Silesia, Siedlimowice, from two-mica granite and enclaves, origin, 88M/4262; E Pyrenees, coexistence with muscovite in metamorphic rocks, 88M/4714; Spain, Central System, Sierra de Guadarrama, polytypes of, 88M/6026; USA, W.-central Maine, muscovite-almandine geobarometer, Devonian, Carboniferous metamorphism, 88M/6422; Nevada, White Pine County, from aplites, quartz veins, 88M/6027; USSR, Pamirs, Cr-bearing, in metasomatic, hydrothermal formations, 88M/4263

-, paragonite, E. Pyrenees, coexistence with muscovite in metamorphic rocks, 88M/4714

-, phengite, geobarometry based on limiting assemblage with K-feldspar, phlogopite, quartz, 88M/0561; Greece, Skiros Is., and coexisting chlorite from low grade rocks, distribn. of elems. between, 88M/4264; Switzerland, Grisons, Vals, red, occurrence, 88M/2583

-, phlogopite, ammonium-, hydrothermal synthesis, 88M/3734; and natural tremolite. talc, F-OH substitution in, 88M/6021: Cs-selective ion sieve made by topotactic leaching of, 88M/5329; high T solution calorimetry, thermodynamic props., Al-Si and stacking disorder, phase equilibria, 88M/2071; sector-zoned, in igneous rocks, 88M/0998; Canada, Ontario, Sharbot Lake, alteration to corrensite, 88M/0182; England, Devon, and assoc. mins. from Permian minettes, 88M/2578; France, Hérault, Lodève, megacrysts, in analcitite, descriptn... 88M/1235; Poland, Upper Silesia, Zawiercie, from lamprophyres, chem. anals., 88M/2579; South Africa, Roberts Victor eclogites, O isotopes in coexisting garnets, clinopyroxenes, phlogopites, implications for petrogenesis, mantle metasomatism, 88M/0804; USA, Montana, Stillwater complex, within olivine cumulate. compn. of, 88M/6024; USSR, Primorye, Shirokopadninskoye deposit, manganous Ba-rich, occurrence, 88M/4265

-, sericite, variation in compns. from fracture zones within geothermal system, 88M/0603; USA. Colorado, Silverton caldera, correlation among struct., compn., origin, particle thickness, 88M/2581

-, tobelite, hydrothermal synthesis from various starting materials, implications for occurrence in nature, 88M/4271

-, white, Portugal, from Sn, W deposits, geochem., 88M/5555; USA, Maine, Catheart Mt. porphyry Cu deposit, geochem., 88M/6029

Micaceous minerals, dioctahedral, anal. of cation distribn. in, IR spectroscopy data, 88M/3467

Microcline v. feldspar

Microdiorite enclaves, Nd, Sr isotope content, mantle input, 88M/2203

Microlite, stannomicrolite, compn. 88M/1042

-, stibiomicrolite, reinstatement of, as valid species, 88M/4344

Microrefractometer, Jelley, theory 88M/3267

Microscopy, application of TEM to easel painting samples, 88M/6486; highresolution electron, of min. structs., (book), 88M/3329; high-resolution electron, present, future of, 88M/5072; improved methods for prepn. of polished sections, 88M/0053; ore, image anal. and extractive metallurgy of sulphide mins., overview, 88M/3256

Migmatite, Egypt, Aswan, High Dam Western Quarry, petrogr., 88M/1481; France, Massif Central, W. Vivarais, formed by partial melting of metagranites, 88M/3056; Greenland, Liverpool Land, isotopic age dating, 88M/4871; Italy, Rometta-S. Pier Niceto, paragneiss-leucosome assocn., 88M/4717; Sweden and Norway, results of almost isochem. partial melting, 88M/4699 Milarite group, mins. of, descriptn., 88M/2553

Millerite, USA, Illinois, occurrence, 88M/6478 Mine waste, effect of rehabilitation on rate of oxidation of pyrite in mine waste rock dump, 88M/1960; geochem. interactions

88M/5110; N storage in, exptl. study of ammonium, K partitioning between 1M-phlogopite and vapour at 2 kb, 88M/5472; weathering, TEM study, 88M/5028; Canada, Ontario, English River subprovince, evaluation of biotite-garnet geothermometers, application to, 88M/6420; Quebec, Gaspé, McGerrigle thermal aureole, and cordierite, chemographic relationships, 88M/4752; Val d'Or, Malartic, Chibougamau, from gold deposits, geochem., 88M/2577; China, Taiping-Huangshan batholith, relationship between compns, and unit-cell parameters of, 88M/0999; Czechoslovakia, Hodrušaintrusive complex, Štiavnica granodiorite, significance for ore-content evaluation, 88M/2580; France, Massif Central, Massif de Guéret, granitic rocks, units distinguished by chem. compn., 88M/6161; Greece, Paranesti, Mn-rich, from granitic rocks, 88M/1000; Japan, Kyushu, from granodiorites, grain-size dependent variation of Rb content in, 88M/2132; South Africa, Namaqua mobile

belt. Keimoes suite, in two dissimilar

granites,

relationships, 88M/1261

geochem., petrogenetic

- between acidic tailings fluid and bedrock: use of the computer model, 88M/1961; Greece, waste disposal area, gammaspectroscopy in marine sediments, organisms from, 88M/5325
- Mineral analysis, fast neutron transport in selected materials relevant to large volume mins. anal., 88M/1698; PDF Mineral File Workbook, 88M/3276
- art, history of, 88M/6484
- collections, USA, Colorado Springs, Proctor collection, 88M/6488; University of South Carolina, McKissick Museum, 88M/6489; Texas, Houston Museum of Natural Science, Perkins and Ann Sams, 88M/6487
- deposits, deep-sea, long-range potential, 88M/0302; dispersion patterns of carbonyl sulphide above, 88M/0878; nearshore, seabed, economic anal., 88M/0302; technological mineralogy, (book), 88M/4972; Belgium, 88M/3527
- exploration, application of discriminant anal., probabilistic classification to geochem. stream-sediment data, 88M/2462; applied remote sensing research for, 88M/3296; geochem., struct. of stratiform deposits with portable microcomputer, 88M/2457; in areas of preglacial deep weathering, conceptual models geochem., 88M/0884; lag sampling. geochem, sampling medium for arid regions, 88M/0875; magnetic method applied to, 88M/3131; portable digital voltammetry, application to ultra trace anal., 88M/3297
- names, cleavelandite, named after Parker Cleaveland (1780–1858), 88M/4841; danalite, named after James Dwight Dana (1813-1895), biogr., 88M/4842; keyite, named after Charles Locke Key (1935-), 88M/4841; kimzeyite, named after Joseph Wood Kimzey, 1888-1975, short biogr., 88M/4839; ludlockite, named after Charles Locke Key (1935-), 88M/4841; moydite, named after Louis Moyd (1916-), short biogr., 88M/4840; perhamite, named after Croydon Perham (1934), 88M/4841; sidwillite, named after Sidney Arthur Williams (1933-), biogr., 88M/4842; sylvite, named after Franciscus Sylvius de la Boë (1614-1672), short biogr., 88M/4839; weloganite, named after William Edmond Logan (1798-1875), short biogr., 88M/4840
- nomenclature, I.M.A. Commission procedures for introducing new min. names, 88M/2667
- photography, film and lights, 88M/3255
- species, rare-earth, system of nomenclature for, revision, extension, 88M/6062
- structures, electron diffraction, highresolution electron microscopy, 88M/3329
- surveys, USA, Forest Service lands, assessment of resource potential, 1964–1984, 88M/0295
- systems, multicomponent, constructing subsolidus P-T diagrams for, 88M/5379
- -- fluid systems, isotopic exchange in, 88M/0796

- Mineralization, related to sea-level changes, 88M/5188
- Mineralogy, applied, quantitative approach, (book), 88M/0089; (book), 88M/4966; manual of, (book), 88M/4965; new method for obtaining principal reflectances of absorbing mins., 88M/1507
- —, experimental, free energies of formation of NiO, CoO, Ni₂SiO₄, Co₂SiO₄, 88M/0445; method to calculate poss. reactions between coexistent phases of paragenetic assocn., 88M/5366; thermodynamic projection, extra-polation of high-variance min. assemblages, 88M/5344
- —, optical, tensors, matrices in, 88M/1506; vol. 1: theory, techniques, (book), 88M/3337; vol. 2: min. descripns., (book), 88M/3338
- Minerals, anisotropic, check and correction of principal refractive index measurements of, 88M/3268; authigenic, zoning of, genesis, 88M/5024; differences in ion-exchange mobility of atoms in, 88M/0435; formal definitions of type specimens, 88M/3169; identification, database, computer program, 88M/1671; instrumental phase-analytical methods for detn. of min. compns. of rocks, 88M/1672; MINFILE, microcomputer program for storage, manipulation of chem. data on, 88M/4921; new relation between hardness and compressibility, 88M/6435; technical note on polishing of, 88M/3265; type specimens, formal definitions of, 88M/4846
- -, fluorescent, USA, Illinois, 88M/6480
- —, heavy, anal., use in geochem. exploration, 88M/5922; sampling, 88M/2502; Canada, Quebec, Mont-Laurier, radioactive, petrogr., petrochem., min. assocns. of selected rocks and radioactive occurrences, 88M/2184; India, Maharashtra, Ghugus coalfield, Lower Gondwana sediments, 88M/1425; USA, Atlantic coast, offshore resources, nature, distribn., 88M/3610; Florida, off coast of Apalachicola River Delta, reconnaissance, 88M/6351
- —, placer, processing technology for recovery of, 88M/3515
- —, rock-forming, crystal chem., spectroscopy, disorder, high P, synchrotron radiation, 88M/3675; crystal structs., cation sites, 88M/3328; weathering behaviour, thermodynamic equilibrium models, 88M/3695
- Mines, marine, coastal, envtl. impact assessment, 88M/3632; Wales, Cardiganshire, history of, (book), 88M/3331
- Minettes, Ba in dyke rocks of, 88M/2221; W. Europe, and kersantites from Hercynian orogen, geochem. comparison between, tr. elem., Pb-Sr-Nd isotope constraints on origin, 88M/3926
- Mining, Africa, (book), 88M/0088; Germany, Freiberg mining area, history, (book), 88M/0092
- engineering, introductory, (book), 88M/1706
- reclamation, soil compaction in topsoil replacement during, 88M/0422
- Moldavite v. tektite
- Mollusc shells, macromolecules in, functions in biomineralization, 88M/1065

- Molybdenite, Scotland, Argyllshire, Kilmelford, in Cu-bearing intrusive suite, 88M/3570; Sweden, Bergslagen, S isotope data, 88M/3856
- deposit, porphyry, USA, Colorado, Climax, Ceresco Ridge, Mo behaviour during weathering, comparison with Hollister deposit, N. Carolina, 88M/3912
- mineralization, Czechoslovakia, Bohemian massif, discovery of greisen related to, 88M/1913
- -- bismuth deposits, Australia, New South Wales, Kingsgate, evaluation of fluid inclusion decrepitometry using quartz from, 88M/4278
- Molybdenum, comparative marine chem., 88M/0590; in sea-water, direct detn. by adsorption voltammetry, 88M/4957; in spring waters, ICP-AES, ICP-MS detn., 88M/5943; S. Bulgaria, in granitic rocks, quartz-adularized volcanic rocks, mode of occurrence, 88M/0717; Pacific, in ferromanganese nodules, 88M/5728; USA, Colorado Mineral Belt, distribn. in Precambrian rocks, comments, 88M/3857, reply, 88M/3858
- deposits, China, Shaanxi province, Jingduicheng, porphyry, geol. features, origin, 88M/2170, distribn. pattern, origin of ore-bearing fissures, 88M/1923; USSR, Agaskyrskoe, relations of stockwork of granite veins to mineralization, 88M/0376
- mineralization, France, Brittany, Yaudet pluton, 88M/3575; Norway, Oslo region, porphyry, and continental rifting, 88M/1873; USA, New Mexico, Valles caldera, in active geothermal system, 88M/3913
- Monazite, exptl. evidence bearing on stability during crustal anatexis, 88M/3769; synthetic, end-member analogues of, surface reactions of, and evolution of natural waters, 88M/5444; Western Australia, Mt. Weld. supergene, secondary, from carbonatite laterite, 88M/3868; Belgium, Namur province, Rocroi Massif, grey nodules of, in alluvial pan samples from small rivers, 88M/4332; Neufchâteau, nodules in river sediments, 88M/4333; Italy, Novara, Maddalena quarry, occurrence. 88M/1577; USA, North Carolina, Foote mine, occurrence, anals., 88M/2655; Yugoslavia, Alinici, in hydrothermal veins. 88M/6077
- -, gasparite-(Ce), Alps, new min., 88M/2660
- --, kularite, authigenic monazite variety, 88M/1069
- -, monazite-(Nd), Alps, new min., 88M/2660
- type structures, SrCrO₄, SrSeO₄, PbCrO₄ (crocoite), PbSeO₄, comparison, 88M/5140
- MONGOLIA, bimodal magmatic complexes, genesis, 88M/1273; comendites, pantellerites, alkali granitic rocks, geochem., origin, 88M/2854; *REE* and rare elems. in Cainozoic basic volcanic rocks, 88M/5646; xenoliths, occurrence, 88M/2745

Monticellite v. olivine

Montmorillonite v. clay minerals

Montregianite, double-sheet silicate with zeolitic props., symmetry, crystal struct., 88M/0266

Monzogranite, France, Massif Central, Saint Julien-la-Vêtre, and Piolard diorite, interaction between, 88M/6164, field evidence for successive mixing between, 88M/6162

Monzonite pluton, SE Australia, Mt. Dromedary, zoned, fractionation in, 88M/6199; Turkey, central Anatolia, Alpine belt, parallel whole rock isochrons, 88M/0026

Moolooite, hydrated Cu oxalate, inclusions in whewellite, weddellite, in lichens, 88M/1081

Moraesite, Brazil, Minas Gerais, Humaita granite pegmatite, from tourmaline mine, 88M/4335

Mordenite, natural, crystal struct. refinement, 88M/3489

MOROCCO, bornite crystals, occurrence, 88M/4825; geochem. of evaporites in N. Atlantic Rift setting, 88M/5706; W deposits, overview, 88M/1887; central, skarn, vein-type tungsten orebodies, behaviour during thermal metamorphism, hydrothermal infiltration assoc, with, 88M/5751; Bou-Azzer dist., nickelaustinite, min., 88M/4342; Casablanca, Cambrian greywacke, tectonometamorphic evolution, 88M/2585; Rehamnas, Hercynian leucogranites, geol., 88M/1252; W. High Atlas, baryte deposits in albitite, 88M/0396; Zaër granite, Sokhret Allal, zoned W-Sn deposit, chem. compn., 88M/4290

Mössbauer effect study, Libya, desert silica glass, 88M/2540

Mössbauer imaging, exptl. result, 88M/3278, review, 88M/3277

Moydite, crystal struct., 88M/1834; named after Louis Moyd (1916–), short biogr., 88M/4840; Canada, Quebec, Evans-Lou pegmatite, new min. species, 88M/1093

MOZAMBIQUE, metamict zircon from granite pegmatites, 88M/2543

Mud, red, formed as plastic residue during alumina production by Bayer process, 88M/6492

Mudrocks, central North Sea, Upper Jurassic, sedimentary facies, geochem., 88M/5698

Mudstones, high-T alteration, 88M/3699; England, Alston Block and Northumberland Trough, Lower Carboniferous, diagenetic studies, 88M/5014

Mullite, incommensurate struct. by Patterson synthesis, 88M/1793; pseudotetragonal, occurrence, 88M/5458

Mummy, *Central Asia*, geochem., 88M/4140 Muscovite v. mica

Mushistonite, USA, South Dakota, Etta mine, cuprocassiterite discredited as, 88M/2622

Mylonite, high-T quartz-feldspar, deformation mechanisms in, evidence for superplastic flow in lower continental crust, 88M/3029; S-C, in Grenville gneiss, microstruct., c-axis pattern, microstrain, kinematics of, 88M/1179; S-C, influence of crystallographic orientation and grain boundary migration on microstructl. and textural synthetic 88M/1465; in, evolution evolution, anhydrite-halite, textural 88M/2047; Australia, Queensland, Charters Towers goldfield, relationship of gold quartz mineralization to, 88M/5276; Central Alpine 'root zone', 88M/1473; New Zealand, Westland, W. of Alpine Fault, timing of mylonitization, 88M/4750; USA, Arizona, Coyote Mts. metamorphic core complex, shear zone origin of quartzite mylonite and mylonitic pegmatite, 88M/1183; Montana, Bitterroot dome, amphibolite-facies, transition from, to chloritic breccia, role of mylonite in formation of Eocene epizonal plutons, 88M/6426

Mylonitic rocks, quartzo-feldspathic, textural map units in, 88M/4693; USA, South Carolina and Georgia, Augusta fault zone, kinematic history of, 88M/6427

Myrmekite v. feldspar

Nabokoite, new min. of volcanic exhalations, 88M/1094; Germany, new min. occurrences, 88M/6475

Nakauriite, USA, Pennsylvania, Cedar Hill, new blue min., 88M/1584; USA, Pennsylvania, Lancaster County, Cedar Hill Quarry, new occurrence, 88M/1061

NAMIBIA, Damara orogen, reverse age relations of talc, tremolite, deduced from reaction textures in metamorphosed siliceous dolomites, 88M/6410; role of sedimentary and tectonic brines, 88M/5787; Sn-W metallogeny, 88M/3896; uraniferous granites, regional, geol., structl. setting, 88M/5175; Damara Province,, Brandberg complex, fossil hot spring system, 88M/6366; S. margin zone of Damara Orogen, iron formations related to mafic volcanism, ensialic rifting, 88M/5199; Gibeon field, megacrysts in kimberlites, 88M/2844; Matchless Cu deposit, deformed, metamorphosed massive sulphide deposits, 88M/0369; Tsumeb, fahleite, new min. belonging to smolianinovite group, 88M/6089

Namuwite, *Greece*, *Laurium*, occurrence, 88M/4823

Nasonite, detection of non-hexagonal symmetry in apatite-struct.-related min., 88M/0239

Natroalunite, Egypt, Gemsa, Gulf of Suez, authigenic, in Miocene evaporites, 88M/2640; India, Kutch, Deccan Trap basalt, in laterite profile, 88M/0195

Natrochalcite-type compounds, crystal struct., with ref. to H bonds, 88M/5145

Natrolite v. zeolite

Natrophyllite family, mixed phosphates from, phys. props., 88M/6447

Neodigenite, *Italy, Ortiglieto, Marciazza*, Cu-pyrite mineralizations, 88M/1882

Neotocite, USA, North Carolina, Foote mine, occurrence, 88M/2567

NEPAL, presence of microorganisms in sparry magnesite, implications, 88M/3099; S., groundwater flow systems in wet alluvial fan, isotopic anal., 88M/5874; High Himalaya, Manaslu, peraluminous granite, H, O isotope variations in, evidence for heterogeneous sedimentary source, 88M/3948

Nepheline, *Italy, Alban Hills*, in ejecta, 88M/2602

Nephelinite, petrol., 88M/2786; USA, Texas, Balcones province, Cretaceous, petrogenesis, 88M/4433; Zaire, Mt. Nyiragongo, U, Th enriched, petrol., geochem., bearing on ancient mantle metasomatism, 88M/2230

Nephrite v. amphibole

Neptunium, migration in oxidizing clayey sand, 88M/1959

NETHERLANDS, Pb-Zn mineralization in Dinantian rocks of boreholes, 88M/3855; Scheldt estuary, organic complexation, control of dissolved concns. of Cu, Zn, 88M/2425; South Limburg, Heugem, anhydrite and calcite pseudomorphs after anhydrite from Viséan rocks, Sr isotopic anal., 88M/3864; Valkenburg a/d Geul, coal, borehole samples, petrogr., 88M/4644; Valkenburg a/d Geul, Thermae 2002 borehole, clayey intervals, clay mineralogy, 88M/3399

Neutron activation analysis, multielem. instrumental, optimization of, 88M/4941

New minerals, 61 mins. approved in 1985, 88M/4348; descripn. of 82 new mins. contrib. by Belgian mineralogists since 1830, 88M/4347; I.M.A. Commission procedures for introducing new min. names, 88M/2667; new members of hydrotalcite-massaseite group, 88M/4346; procedures involving IMA commission, guidelines on min. nomenclatures, 88M/1100

New minerals acuminite, 88M/2658 ammonioalunite, 88M/6084 amstallite, 88M/1082 atlasovite, 88M/1094 baileychlore, 88M/6085 bazhenovite, 88M/4336 blatterite, 88M/4337 blossite, 88M/1083 bobfergusonite, 88M/1084 cassedanneite, 88M/6086 cesplumtantite, 88M/1085 cetineite, 88M/1086 chekhovichite, 88M/6087 cobaltaustinite, 88M/6088 danielsite, 88M/1087 ecandrewsite, 88M/4338 ertixiite, 88M/1088 fahleite, 88M/6089 ferristrunzite, 88M/2659 filipstadite, 88M/6090 fluorellestadite, 88M/4339 franklinfurnaceite, 88M/1089 gasparite-(Ce), 88M/2660 grumantite, 88M/1090 hentschelite, 88M/1091 howardevansite, 88M/6091 ingersonite, 88M/6092 kadyrelite, 88M/4340 kamiokite, 88M/4341 kuzminite, 88M/1092 lucasite-(Ce), 88M/2661 ludjibaïte, 88M/6093 lyonsite, 88M/2662 mcbirneyite, 88M/2663 monazite-(Nd), 88M/2660 moydite, 88M/1093 nabokoite, 88M/1094 nickelaustinite, 88M/4342 pahasapaite, 88M/2664 panunzite, 88M/6094 parabariomicrolite, 88M/1095 parabrandtite, 88M/1096

paraotwayite, 88M/4343 perroudite, 88M/695 reichenbachite, 88M/1091 roxbyite, 88M/6096 sieleckiite, 88M/6097 stibiomicrolite, 88M/4344 trabzonite, 88M/2665 vantasselite, 88M/2666 yakhontovite, 88M/1097 zincochromite, 88M/1098

zincochromite, 88M/1098 NEW ZEALAND, Alpine schist, shallow-level metamorphic fluids in high uplift rate metamorphic belt, 88M/4067; and E. Australia, geol. units common 88M/6127; archaeology, radiocarbon dating, 88M/4908; asymmetric back-arc spreading, heat flux, struct. assoc. with Central Volcanic Region, 88M/4777; delineation of ultrabasic rocks by computer processing of 88M/6131: satellite imagery data. 'Dunedin', LL-3 meteorite. 88M/5967; erionite, IR and adsorption studies, 88M/6048; F detn. in coals by F ion-selective electrode method, 88M/5727; genesis, classification of soils on wet terraces, moraines, 88M/5043; history of science, (book), 88M/4971; island arc tectonics manifested in He isotope ratios, 88M/0734; K in soils, genetic soil classification, 88M/5047; lamprophyre dyke intrusion and age of Alpine fault, 88M/3241; mantle xenoliths, review, nitrate contamination of 88M/2757; aquifers, 88M/5335; Pt- -group metal occurrence, 88M/5225; REE, tr. elems. in Fe-Mn concretions in soils, 88M/4041; role of ¹⁸O, deuterium, tritium in hydrology, 88M/5827; standards, measurement techniques, reporting of measurements for ¹⁸O, deuterium, tritium in hydrology, 88M/5828; test of Rn ground measurements as geothermal prospecting tool, 88M/5932; volcanic hazards assessment, (book), 88M/0108; Auckland, Rangitoto Is., palaeomagnetic studies, 88M/1545; Bay of Plenty coast, heat flow measurements, 88M/4781; Campbell Is., soil pattern, 88M/5046; Canterbury, mid-Cretaceous garnet-bearing, intermediate and silicic rocks, origin, evolution, 88M/0686; Coromandel, relationship of palaeosubduction regime and prospectivity of epithermal gold field, 88M/3557; Cooks Beach-Hahei area, obsidian deposits, geol., geochem., contribn. to archaeological sourcing studies, 88M/5655; Croisilles and Patuki, metavolcanic rocks, geochem., implications for early Permian subduction polarity, 88M/5656; Dun mountain terrain, Permian ophiolites, genesis, 88M/6294; Fiordland, Phanerozoic granulites, Sm-Nd, Rb-Sr isotopic, geochem. systematics, 88M/5757; Flaxbourne River, Cretaceous-Tertiary boundary biostratigr., geochem., 88M/2539; Haast schist belt, inversion T of quartz crystals, prelim. survey, 88M/6042; Hikurangi convergent margin, envt. of classical accretionary prism, 88M/6130; Lyttelton Volcano, Miocene, two centres indicated by trends of radial dykes, 88M/4588; Marlborough Sound, Maud Is., soils, differentiation, chem., 88M/5050; Mokau. coal, chem. props., compn., 88M/0776; Nelson, Waikoropupu Springs and Takaka River, isotope hydrol., 88M/5829; Ngawha Springs geothermal region, petroleum biomarker seepage, bitumen. active 88M/2437; North Island, subduction-related volcanic arc, Neogene (book), sedimentology, volcaniclastic 88M/0105; allophane soils, phys. props., 88M/5056; large scale rhyolitic volcanism at convergent plate boundary, 88M/6258; regional geol., 88M/6132; thiosulphate in surficial geothermal waters, 88M/5790; Northland, eastern volcanic belt, petrol., 88M/6256; pillow lava, mineralogy, chem., tectonic significance, 88M/1330; Oruanui eruption, new 14C age, 88M/4909; Otago Harbour, Zn and reactive silicate distribn. in estuary, 88M/0828; Otago schist, hydrothermal near-surface 88M/3599; E. Otago, soils from weathered schist, formation, chem., mineralogy, 88M/5049; plate-boundary zone, million years of deformation, 88M/4406; Rotorua, geothermal aquifer, hydrol., 88M/5850; Ruapehu, facies model for active composite volcano, 88M/6257; kinematic wave theory lahars, 88M/6260; South Auckland, Te Kuiti group, palaeoenvtl. controls on min. assemblages in shelf sequence, 88M/6344; South Island, allophane in yellow-brown shallow and soils, high country, upland yellow-brown earths, 88M/5057; dissolved organic C in streams, rivers, spectrophotometric detn., 88M/5909; Kawakawa Tephra, new occurrences, 88M/1329; W. Coast, chem., agricultural development of soil, 88M/5336; oils, sediments, biol. marker study, 88M/5908; wet-land soils, props., genesis, micropedology, 88M/5053, mineralogy, 88M/5052, particle size 88M/5051, type localities, profile morphol., soil chem., 88M/5045; Westland and Otago, alkaline lamprophyres, Sr. Nd. Pb isotope study, 88M/4421; South Otago continental budget for modern-Holocene sediments, 88M/6343; Holocene evolution of nearshore sand wedge, 88M/1433; Southern Alps, gold mineralization in high uplift rate mountain belt, 88M/5224; thermal, mechanical consequences of rapid uplift, 88M/4780; Callery River headwaters, geol., vein mineralization, 88M/4749; Stewart Is., tarpaulin metagranite, (new name), occurrence, 88M/4751; Taranaki, McKee fm., heavy min. suites of core samples, implications for provenance, diagenesis, 88M/4664; Taupo volcanic zone, struct., evolution, economic importance, 88M/6259; Ruapehu composite volcano, volcanic hazard assessment, 88M/4586; Tauranga, geochem., isotope identification of warm groundwaters in coastal basins, 88M/5826; Mt Tongariro, Ketetahi Hot Springs, phys., chem. survey, 88M/6261; Tongariro volcanic centre, petrogr., origin of metasedimentary xenoliths in lavas, 88M/4587; Waikato, coals, chem. props., compn., 88M/5726; Lake Waikaremoana, limnology, with ref. to littoral, pelagic primary producers, 88M/5332; Wairarapa. Te Kaukau Point, Amuri facies, in situ and intrusive sandstone in limestone, 88M/4665; Upper Waitemata Harbour, Lucas Creek, sedimentation patterns, catchment use change recorded in shallow tidal creek 88M/5334; Wellington sediments. Torlesse, lawsonite-bearing Peninsula. veins in greywacke, metabasite, 88M/4748; Westland, W. of Alpine Fault, timing of mylonitization, 88M/4750; Westmere, soil variability in silt loam in relation to size of sampling area, chem. variability, 88M/5054, morphol. variability, 88M/5055; White Is., redox processes governing chem. of fumarolic gas discharges, 88M/2247

Newberyite, crystallization in silica gel, 88M/5445

NICARAGUA, geochem. of metallic tr. elems. in fumarolic condensates, 88M/2281; El Limón mining dist., caldera-related gold mineralization, 88M/2927; Momotombo geothermal field, hydrothermal quartz crystals from four wells, petrogr. correlations, fluid inclusion anal., 88M/2133; San Cristobal volcanic complex, geol., 88M/2928

Nickel, in asbolan, forms of occurrence of, 88M/1035; thermophys. measurements on, 88M/3705; *Cuba*, forms taken by Ni in nickeliferous mins. in silicate-oxide ores, 88M/5083

— compounds, NiO, solubility in Al_2O_3 , 88M/3750

 deposits, solubility of serpentine, nontronite, montmorillonite, chlorite from, 88M/5183; Brazil, Minas Gerais, Fortaleza de Minas O'Toole, geochem. orientation survey, 88M/5933

— ores, Western Australia, deformation, remobilization, 88M/1856

— silicate ore, in solution cavities, genesis, 88M/1889

— -copper mineralization, Scotland, Newton Stewart, Talnotry, 88M/3571

— — — sulphide mineralization, *Turkey, Pancarli*, genesis, 88M/1917

Nickelaustinite, *Morocco*, *Bou-Azzer dist.*, new min., 88M/4342

Nickeline, Scotland, Newton Stewart, Talnotry, in Ni-Cu mineralization, 88M/3571

NIGERIA, evidence of tectonic control of mineralization from lineament density anal., 88M/4173; mineralogy. geochem. dispersion in tropical residual soils overlying talc deposit, 88M/2466; primary Au mineralization, 88M/0335; soils, exchangeable cations, mineralogy, 88M/0207; Benue Trough, Arufu and Akwana Pb-Zn-F mineralization, mineralogy, fluid inclusions, genesis, 88M/3593; Upper Benue Trough, 'Gongola Basin', Guberunde Horst, stream sediment geochem., 88M/4174; Isanlu, geochem. prospecting for gold, 88M/0908; Kaduna Province, blue, yellow sapphire, 88M/2094; Kwara State, Itakpe area, banded iron formations, genesis, 88M/3544;

Lokoja, schists in metasedimentary belts,

Rb/Sr dating, implications for Precambrian evolution, 88M/3221; Niger-Nigerian alkaline ring complexes, example of Phanerozoic anorogenic mid-plate magmatism, 88M/2798; Oban Massif, granitic rocks, petrol., geochem., 88M/4489; Okene area, geol., geochronol., evidence for Eburnean orogenic cycle, 88M/3222; Provinz Kaduna, blue, yellow sapphires, occurrence, 88M/0572; Uwet area, Oban Massif, metasedimentary rocks, geochem., 88M/4058

Niningerite, normal, reverse zoning in, novel key parameter to thermal histories of EH-chondrites, 88M/5966

Niobates, characterization of amorphous state in, EXAFS, XANES anals., 88M/5089

Niobium, S. Greenland, large occurrence, 88M/5246

Nitrate, and sulphate in precipitation, relationships between concentration, deposition of, 88M/0401; O isotope anal., applications, 88M/2368; Israel, Negev Desert, origin, 88M/2310; New Zealand, contamination of aquifers, 88M/5335

— deposits, USA, California, Amargosa River valley, chem., mineralogy, origin, 88M/6352

Nitrogen, southern Africa, N isotopic evology, implications for envtl. and dietary tracing, 88M/1962; USA, Potomac River and estuary, N distribn. in sediments, 88M/1979—isotopes, fate of ¹⁵N-labelled ammonium

 isotopes, fate of ¹³N-labelled ammonium nitrate applied to established grass sward, 88M/0199

Noble gas v. gas, noble

Nontronite v. clay minerals

Norite, corona, France, Aveyron, La Bessenoits, in gneissic massif, 88M/4712

 dykes, W. Greenland, early Proterozoic boninitic magmatism, 88M/5623

 diorite intrusions, USSR, Voronezh crystalline massif, primary komatiite source for Ni sulphide ores in, 88M/5585

NORTH AMERICA, catalogue of tephra in altered, unaltered states, for use in studying tephra diagenesis, 88M/1349; gravity domains and assembly of North American collisional tectonics, continent by 88M/4795; pyrite isotopic compn., relationship to organic matter type, iron availability in Cretaceous shales, 88M/3990; E. margin, middle Jurassic-early Cretaceous igneous rocks, geochem., 88M/3963; continental slope off New Jersey, microtektites and tektite fragments, chem. compn., 88M/5998; Cordillera, behaviour of scheelite in stream, 88M/2495; diamond exploration geochem., 88M/2494; exploration, (book), 88M/1704; Monteregian hills and White Mt., alkaline igneous provinces, petrol., 88M/2802

NORTH SEA, chalk diagenesis, effect on reservoir location, props., 88M/6315; detrital garnets as provenance, correlation indicators in reservoir sandstones, 88M/6316; model simulation of atmospheric input of Pb, Cd into, 88M/5319; central, Upper Jurassic mudrocks, sedimentary facies, geochem., 88M/5698; N, source parameters for earthquakes, 88M/1591; E, flows of Cd, Cu, Hg, Pb, Zn

through coastal area, 88M/4082; between Channel and Meuse River, Variscan front and Midi fault, new cross-section, struct... 88M/1156; Brae field area, geochem. effects of primary migration of petroleum in Kimmeridge source rocks, 88M/5888; Central Graben, and Danish sub-basin, Cretaceous chalk, O, C isotope compns... 88M/2296; Ettrick oil field, complex diagenesis in Zechstein dolomites. 88M/6314; Greater Ekofisk area, late Cretaceous, early Palaeocene Chalk Group, 88M/1411; Norwegian sector, thickness of pre-Zechstein-salt Palaeozoic sediments, 88M/1136; Oslo Graben, gravity high, taphrogenesis, 88M/3150; Sola fm., Lower Cretaceous, organic C-rich, sedimentol., geochem., 88M/5699

NORWAY, Caledonides, U/Pb ages of ophiolites and arc-related plutons, implications for development of Iapetus, 88M/4874; humic lakes, relative importance of acidity sources, 88M/2371; jack-strawtextured olivines in metaperidotites, 88M/0970; 'sparagmites', feldspathic sandstone, Proterozoic stratigr., 88M/4372; N, ultramafic complexes Caledonides, regional setting, field relationships, 88M/2815; multi-textured garnets from single growth event, 88M/6379; tectonic model for evolution of Finnmarkian Caledonides, 88M/1128; Bergen Arc, chronol. of P-T history recorded by granulite terrain, 88M/4873; Bjerkreim-Sokndal, lopolith, nature of parental magma, 88M/6151; central Scandinavian Caledonides, Tømmerås Window, metamorphism, timing of thrusting, 88M/4700; Trondheim nappe, basic rocks, geochem., 88M/3039; Drammensfjord, Mn cycling in permanently anoxic fjord, 88M/5801; Duke Is, and Skaergaard intrusions, layering, related structs., similarities, differences, origins, 88M/1191; Fanafjell nappe, Major Bergen Arc, granite, tectonostratigraphic position, 88M/1230; Fen complex, carbonatite complex, Pb isotope geochem., age, petrogenetic implications, 88M/3919; mantle, crustal components in carbonatite complex, evolution of carbonatite magma, REE, isotopic evidence, 88M/0698; model for evolution of hematite carbonatite, whole-rock major and tr. elem. data, 88M/2345; Finnmark, davidite-loveringite in early Proterozoic albite felsite, 88M/6055; thrust transport directions, thrust sheet restoration in Caledonides, 88M/1129; Fongen-Hyllingen layered mafic complex, emplacement, crystallization of compositionally stratified magma, 88M/1190; Fosen-Namsos Western Gneiss Region, general structl.-photogeol., tectonic features, 88M/4698; Framvaren, formation of framboidal iron sulphide in water of permanently anoxic fjord, 88M/5800; partitioning, enrichment of tr. metals in sediment core, 88M/5692; S chem. of super-anoxic fjord, 88M/5798; Framvaren Fiord, Hg in, 88M/5805; solution chem. of iron(II) in, 88M/5799; tr. metals in water column, 88M/5804; U, Ra, Th isotope

distribus in anoxic fjord, 88M/5803; N. Hadeland, structl. geol., 88M/1133; Helgeland nappe complex, Mosjøen unit, Rb/Sr age, timing of tectonometamorphic events, 88M/0003; Hinnøy, Caledonian basement-cover relationships. regional correlations. 88M/1131: Honningsvåg intrusive suite, organization, internal struct. of cyclic units, implications, 88M/1194; Jotunheimen, plagioclase fabric development in high-grade shear zone, 88M/4374; Jotun-Valdres nappe complex, heterogeneous deformation, mylonitization of granulite complex, 88M/6380; Kongsberg, Ag and assoc. mins., occurrence, 88M/4799; Nelaug, migmatites, results of almost isochem. partial melting, 88M/4699; Nord-Trøndelag, Bindal Massif, intrusive rocks, Rb-Sr dating, 88M/1600; Nordland, Valnesfjord region, W exploration, 88M/0901; Oslo, bromellite from syenite pegmatite, 88M/4287; Oslo region, continental rifting and porphyry Mo occurrences, 88M/1873; Osen-Røa thrust sheet, lateral, vertical changes of deformation style, 88M/1134; Oslo Rift, olivine clinopyroxenite xenoliths, 88M/6150; petrogenetic processes assoc. with intermediate and silicic magmatism, 88M/5625; Ringsaker, Brumunddalen, evidence of synsedimentary tectonics in Lower Silurian (Llandovery) comment, 88M/1132; Rogaland, orthopyroxene-clinopyroxene pairs, geothermometry, 88M/4251; zircon in charnockitic rocks, petrogenetic implications, 88M/2542; Rogaland/Vest Agder, Precambrian dolerite dykes, tholeiitic compn., major elem. chem., 88M/1228; Proterozoic anorthosite massif, petrogenesis, Nd, Sr isotopic study, 88M/5748; Seiland, variations in garnet, plagioclase compn. in pelitic blastomylonitic schists with declining metamorphic grade, 88M/2545; Skaergaard intrusion, rhythmic layering, 88M/1192; Sør-Trøndelag, Meldal, Horg syncline, geol., struct., 88M/2672; Sorov. reinterpretation of Finnmarkian deformation, 88M/1130; Sparagmite region, exploration for sandstone Pb deposits, 88M/2459; Brøttum fm., Proterozoic sandstones, albitized microcline grains of post-depositional, probable detrital origins, 88M/6041; Stavanger, Strand Peninsula, polymetamorphic thrust unit, lithol., 88M/6381; Steinkjer, Ytterøy and Lerkehaug, ages of lamprophyre dykes, 88M/0004; Sunnmøre, Eiksunddal eclogite complex, magmatic, metamorphic controls on chem. variations in, 88M/3036; Tørdal, complex stacking sequences in lepidolite, 88M/3466; Trøms, Salangsdalen and Gratangenfjord, geol., 88M/3037; S. Trøms, Grønfjellet nappe, metabasites, petrogr., geochem., 88M/3038; Tromso, Senja nappe, Caledonides, geochem. evidence for rift-related origin of metadolerites, 88M/1229; Trøndelag, Landsat TM-data used in mapping of large-scale geol. structs. in coastal areas, 88M/4375; Tverrfjell, Cu-Zn deposit, geol. setting, 88M/3567;

Western Gneiss region, compilation of radiometric age detns., 88M/1599

NORWEGIAN SEA, diagenesis of titaniferous mins, in Jurassic sandstones, 88M/6313

Nuclear waste disposal v. radioactive waste

Obituary, James Phemister 1893-1986, former editor of Min. Abstracts, 88M/4836, account of work over 45 years, 88M/4837

Obsidian deposits, New Zealand, Coromandel Peninsula, Cooks Beach-Hahei area, geol., geochem., contribn. to archaeological sourcing studies, 88M/5655

Ocean crust v. Earth, crust, oceanic

Oceans, early Palaeozoic, Nd, Sr isotopic variations, 88M/2125; late Precambrianearly Palaeozoic, model of progressive ventilation of, 88M/5780; prospects for isotopic geochem. studies of, 88M/5778; Atlantic Ocean, variability in deep and intermediate water circulation during past 25 000 yrs, N. Hemisphere modulation of Southern Ocean, 88M/5832; Sohm abyssal plain, abyssal plains, heat flow and depth vs. age for Mesozoic, implications for Bermuda Rise, 88M/1549; SE Pacific, abundances, seamounts, distribns., 88M/4619; W. Pacific, deep-sea trenches, noble gas elem., isotopic abundances in, 88M/5834

Offretite v. zeolite

Ogdensburgite, Mexico, Durango, Mapimi, new data, 88M/1040

Oil v. hydrocarbons

Oligoclase v. feldspar

Olistostromes, USA, California, Klamath Mts.,

Pit fm., problems of recognition, 88M/1445 Olivine, activated complexes and pHdependence of rates of hydrolysis, 88M/3731; and clinopyroxene, basaltic liquid, partitioning of Hf, Lu, Ti, Mn between, 88M/0456; and metal, basaltic liquid, partitioning of Fe, Ni, Co between, exptl., thermodynamic study, application to compn. of lunar core, 88M/5397; anion, cation partitioning between olivine, plagioclase phenocrysts, and host magma, ion microprobe study, 88M/2126; cation ordering in Co-Mg olivine solid-solution series, 88M/0241; Co-monticellite, crystal struct., significance as solid solution crystal. 88M/0243; dependence of creep in, on homologous T, implications for flow in mantle, 88M/4760; exptl. studies of thermal grooving in olivine and albite melt system, 88M/0519; electron petrol. of relic fluid inclusions in, H2O-CO2 fluids in alpine-type mantle peridotites, 88M/4608; (Fe,Mn)2-SiO₄, magnetic struct., cation distribn. in, by neutron diffraction, 88M/5088; from ultramafic xenoliths, distribn. of tr. transition elems. in, microprobe anal., 88M/2194; in dunite, orientation of, from elastic wave velocity measurements. 88M/4761; magma density at high P, test of olivine flotation hypothesis, 88M/0470; mantle, planar OH-bearing defects in, 88M/0969; metal extraction by use of melted ammonium sulphate, 88M/5475;

Mg2GeO4 olivine- spinel phase transition, Mg₂GeO₄, microstruct. evolution during transformation of, to spinel, 88M/2060; Mg-rich, in enstatite chondrites, sulphidation of, 88M/0945; natural occurrence of hydroxide in, 88M/0971; natural, O, Si self-diffusion in, at T = 1300°C, 88M/6436; (Ni,Mg)_{4n+6}- Ge_{2n+1} - $O_{8(n+1)}$, new structl. family related to, 88M/5071; O buffering by retrograde min. pair orthopyroxene-olivine in contact metamorphosed iron formations, 88M/1448; olivine-melt reaction, petrol. implications, exptl. study, 88M/1299; olivine-melt, T, compn. dependencies of tr. partitioning, 88M/3721; role of surface speciation in low-T dissolution of, 88M/3706; serpentinization of, in ultrabasic rocks, reaction model for, 88M/6145; solid solution, exptl. vaporization, condensation of, 88M/3717; synthetic, and orthopyroxenes, Ni-Mg partitioning between, application to geothermometry, 88M/5451; synthetic Ni-Mg solid solutions, single-crystal XRD studies, 88M/1791; theory of zoning patterns in magmatic mins. using olivine as example, 88M/5999; thermochem. data, evaluation, 88M/1991; Belgium, Liège province, Chaudfontaine, assoc. with baryte, 88M/3887; China, zoned, in basic-ultrabasic rocks, study, 88M/4240; Japan, Hokkaido, Hidaka metamorphic belt, in norite, 88M/4507; Norway, jack-straw-textured, in metaperidotites, 88M/0970; USA, Arizona, San Carlos, surface destabilization, lab.-induced non-stoichiometry in, 88M/5448; Colorado, and Japan, Fe-deficient olivine struct. type mins., occurrence, 88M/4241; Hawaii, Kilauea Volcano, diverse types in lava of 1959 eruption, bearing on eruption dynamics, 88M/1343; Minnesota, Duluth complex, reequilibration of, with trapped liquid, 88M/1291

-, fayalite, Germany, Schieder Village, in slags of medieval iron-works, spinifex textures, texture zoning in, 88M/5378

forsterite, conflicting results deformation props., 88M/0240; crystal struct. under high P up to 149 kbar, 88M/3447; lattice dynamics, thermodynamics of Mg₂SiO₄ polymorphs, 88M/5449; plus albite at high T, P, stability, petrol. implications, 88M/5385; -saturated join Mg₂Si₂O₆-CaMgSi₂O₆ at atmospheric P, subsolidus phase equilibria, 88M/5464; single-crystal absorption, reflection IR spectroscopy, 88M/5087; synthetic, electron paramagnetic resonance, polarized optical absorption spectra of Ni²⁺ in, 88M/5086; forsterite-anorthite-diopside, crystal/melt partitioning of Ga, Ge in, exptl. detn., 88M/1998; system forsterite-enstatite at high P, T, effects of H2O on phase behaviour of, implications for Earth, 88M/3720; system forsterite-nephelinesilica at 28 kbar, liquidus surface of, 88M/5392; India, Andhra Pradesh, Vajrakarur area, in kimberlite lamproite rocks, 88M/1276

-, glaucochroite, USA, New Jersey, Franklin, compn., occurrence, formation, 88M/0972

- monticellite, CaMgSiO₄, high-P crystal chem., 88M/1511

-, peridot, cat's eye, descriptn., 88M/2108

-orthopyroxene-garnet geothermometry, geobarometry, palaeogeotherms in upper mantle, 88M/2809

OMAN, black carbonaceous calcite assoc. with serpentinite, 88M/6071; deformation ophiolitic fabric, microstructs. in and host ultramafics,, chromitites 88M/3592; ophiolite, chromite deposits, mineralogical constraints, 88M/0345; ophiolite, Landsat Thematic Mapper imagery, improved discrimination. 88M/1384; origin of crude oils, 88M/4137; S., hydrogeol. of, modern, fossil groundwater in arid envt., 88M/5857; Musandam mts., Dibba zone, thrust tectonics, structl. evolution of Arabian continental margin, 88M/4616; Semail ophiolite, ultrabasic intrusions, structl. relationships, petrol., geochem., 88M/1385; Semail ophiolite, Sumail massif, awaruite, occurrence with native iron, in harzburgite, 88M/1017; Southern Region, Murbat fm., evidence of Permo-Carboniferous glaciation in basal sandstone, 88M/4653; Sufrat and Dawh range, Hawasina, re-imbrication of allochthons, 88M/4728

Omphacite v. pyroxene

Onyx v. quartz

Oolites, S. Wales, Carboniferous, limitations of 'cement stratigraphy', 88M/6320

Opal, amorphous and quasi-crystalline natural, synthetic, XRD, ²⁹Si MAS NMR, 88M/3478; opal-A, incorpn. of Al, Mg, water in, evidence from speleothems, 88M/3479; simulated, 88M/5498; synthetic, study, 88M/5497; Australia, New South Wales, Lightning Ridge, highest quality, occurrence, mining methods, 88M/3779

- - cristobalite, Ireland, in red dust fall, November, 1979, SEM study, 88M/4637

Ophicalcite, USSR, Baer-Bassits, in ophiolite complex, age, origin, 88M/4660

Ophicarbonate rocks, classification, genetic models, 88M/2932

Ophiolite complexes, assoc. with chromite deposits, petrogr., structl. classification. 88M/0288; low-Ti, boninitic and low-Ti subduction-related lavas from intraoceanic arc-backarc systems and, petrogenesis, tectonic setting, 88M/6300; obduction, review, 88M/4610; E. Alps, Mesozoic, review, 88M/2938; Lower Engadin window, Idalp, petrol., geochem., 88M/2937: Austria, E. Alps, Tauern window, Mesozoic, and non-ophiolitic metabasites, petrol., 88M/2936; Chile, S. coastal Cordillera, Palaeozoic, metallogenic, tectonic characteristics, 88M/6307; China, Tibet, Donqiao-Xainxa, petrol., evidence for formation in supra-subduction zone, 88M/1391; Xigaze, ultrabasic rocks, petrol., texture, constraints for mantle struct. beneath slow-spreading ridges, 88M/6293; Costa Rica, Osa Peninsula, Nicoya Complex. Cretaceous-Tertiary, geol., geochem., emplacement, 88M/6306;

Cyprus, Troodos, characteristics, significance of secondary magnetite in profile through dyke component of, 88M/4295; crustal accretion, tectonic setting, 88M/6288; depth trends in magnetic props. in area of prolonged sea-water drawdown in uppermost Troodos-type oceanic crust, 88M/1547; intrusive suite, petrol., 88M/4615; sheeted dykes, petrol., 88M/6287; supercritical two-phase separation of hydrothermal fluids in, 88M/5635; England, Cornwall, Lizard complex, Kennack gneisses, partial melts produced during ophiolite emplacement, 88M/4705; Finland, Jormua maficultramafic complex, early Proterozoic, petrol., 88M/2934; France, Western Alps, Chamrousse, Sm-Nd isotopic study of 500 m.y. old oceanic crust, 88M/0705; Greece, Epidavros, Mn ore deposits, genesis, 88M/6060; Iti, geochem. characteristics, 88M/2222; Othrys, Agrila fm., komatiitetype ultramafic lava, 88M/1383; NE Greece, geol., 88M/4613; India, Andaman, unusual compn. from cumulates, 88M/2946; Naga Hills, contrasting volcanic suites, bearing on tectonic evolution of, 88M/1390; Iran, Palaeozoic, geol., geochem., geodynamic implication, 88M/1388; Italy, Albanides, geochem. of volcanic rocks from, 88M/2941; Bracco, Jurassic-Cretaceous palaeo-geographic reconstruction, 88M/4611; Cottian Alps, Piemonte ophiolite nappe, ovardite occurrences in, significance for process of ovarditization, 88M/2940; Sasso di Castro, and assoc. plagiogranites, geol., petrol., 88M/2939; Western Alps, Monviso, eclogites, geochem. modifications to oceanic metamorphism, 88M/0801; deformational, metamorphic history, poss. record of subduction-collision cycle, 88M/6400; New Zealand, Dun Mountain terrain, Permian, genesis, 88M/6294; Norway, Caledonides, and arc-related plutons, U/Pb ages of. 88M/4874; Oman, Landsat Thematic Mapper imagery, improved discrimination, 88M/1384; Semail, ultrabasic intrusions, structl. relationships, petrol., geochem., 88M/1385; Sumail massif, awaruite, occurrence with native iron, in harzburgite, 88M/1017; Pakistan, Zhob Dist., Bagh area, petrol., 88M/2948; Philippine islands, Luzon, Zambales, oceanic magmas with alkalic characteristics, evidence from basal cumulates, 88M/4423; Saudia Arabia, Precambrian, geol. settings, U/Pb dating, Pb-isotope characteristics, implications for continental accretion, 88M/4896; South belt. Barberton mountain Africa, Jamestown, section through 3500 m.y. oceanic crust, 88M/2943; South Georgia, Larsen Harbour fm., geol., 88M/4407; Turkey, Hatay, Kizil Dağ, REE behaviour in, 88M/2226; Pozanti-Karsanti, stratiform chromite mineralization within, 88M/3591; USA, California, Devils Elbow ophiolite remnant, and overlying Galice fm., new constraints on Jurassic evolution of Klamath Mts., 88M/6304; Kings River, Nd-Sr-Pb systematics, age, implications for depleted

mantle evolution, 88M/0749; Point Sal, compositional, structl. variations of phyllosilicates, 88M/6032; Maine, Boil Mt., geochem., tectonic implications, 88M/2275; USSR, Baer-Bassits, ophicalcite in, age, origin, 88M/4660; Yugoslavia, Macedonia, Demir Kapija-Gevgelija massif, petrol., 88M/6177

Ophiolitic mélange, *India, Jammu and Kashmir, Ladakh, Indus*, volcanic rocks assoc. with, geochem. study, 88M/2945

Orbicular rocks, *Pakistan*, *Swat Kohistan*, *Deshai*, nature, origin of, 88M/1278

- Ore deposits, gas-Hg aureoles above, 88M/0894; metamorphic vein-type, role of fluids in syntectonic mass transport, and localization of, 88M/1848; sedimentary exhalative, ammonium silicates assoc. with, 88M/2471; tectonics, fluids and, mobilization, remobilization, 88M/1845; China, stratabound, discussion on formation mechanism, fluid inclusion approach, 88M/0298; Finland, Outokumpu ore type, 88M/0287
- fluids, magmatic to supergene, processes responsible for deposition of ore and min. deposits, review, 88M/3667
- mineral identification, simple, fullyautomated system for, 88M/0056
- forming processes, crustal, parallel development, 88M/0309
- Organic acid, short-chain, adsorption onto nearshore marine sediments, 88M/0860; synthesis, hydrous pyrolysis, tool for study of, 88M/5792
- compounds, dissolved, in sea-water, characterization of adsorption processes by means of surface dilational props., 88M/4119

— geochemistry v. geochemistry, organic

- matter, alterations of, clue for U ore genesis, 88M/2449; and inorganic, solid, correlation of specific heat, specific atomization energy of, 88M/5351; and natural gas in metamorphic rocks, relationship between, 88M/2429; and very low-grade metamorphism, 88M/4678; containing C, H, O, N, detn. of O stable isotope ratios in, 88M/4958; detection of, in thin-sections of carbonate rocks using white card, 88M/3257; in organic-rich coastal marine basin, sources, accumulation rates of, 88M/4159; dissolved, Cu binding by, variation in type, source of organic matter, 88M/4162; in soil, significance of fractionation in dating age, turnover of, 88M/5058; in temperate characteristics of, by Curie-point pyrolysismass spectrometry, effect of drainage, illuviation in B horizons, 88M/0849; interactions of, at hydrous alumina/ sea-water interfaces, formation of organic coatings on marine particles, 88M/5769; role in sorption of Cu(II) from sea-water onto 7 Å MnO2, 88M/0504; role of mins. in thermal alteration of, exptl. generation of n-alkanes, acyclic isoprenoids, alkenes, sedimentary, geochem. 88M/0863: formation of organosulphur compounds (thiols) by addition of H₂S to, 88M/2452; Atlantic, transformation in waters near

mouth of Amazon, 88M/5848; Canada, Quebec, seasonal, annual variations, contributed by St. Lawrence River to Gulf of St. Lawrence, 88M/2441; S. China, relation with U mineralization in carbonate-type U deposits, 88M/5590; England, E. Midlands, dispersed sedimentary, in Coal Measure horizons, 88M/2423; France, Gard, Trèves, Liassic Zn-Pb orebody and dolomotized petrogr., 88M/1417; Mediterranean, in sapropel S7, late Quaternary, 88M/0850; Pacific Northeast Depression, in ferromanganese nodules, 88M/4149; Panama Basin, decompn. of, at deep-water site, 88M/0865; Poland, Carpathian Foredeep, in Miocene sediments, 88M/5890; USA, Florida, The Everglades, in sawgrass peat, early diagenesis of, 88M/2451; USA, Utah, Phosphoria fm., in shale, effects of weathering on biol. marker, aromatic hydrocarbon compn., 88M/2448

— maturation, England, Kimmeridge Clay fm., and clay diagenesis, relationship between, 88M/5015; France, Haute- Provence, Vergons area, measurements of degree of diagenesis in sediments, 88M/6361

- petrology, recent advances, 88M/2408

Organosulphur compounds, biotransformations of, in sediments via 3-mercaptopropionate, 88M/5886

Orientite, Greece, Epidavros ophiolite sequence, in Mn ore deposits, 88M/6060

Orpiment, *Peru, Quiruvilca*, occurrence with baumhauerite-like mineral, 88M/2632

Orthoclase v. feldspar

Orthogneiss v. gneiss

Orthopyroxene v. pyroxene

Osbornite, standard XRD powder patterns, 88M/3446

Osmium, phys. props. of Os, Ir, Ru, Pt cubic solid solutions, 88M/4770

 isotopes, in diverse natural samples, tandem-accelerator mass-spectrometry measurements, 88M/5934; sources of, in Mn nodules, 88M/5599

Osumilite, *Italy, Latium*, occurrence, 88M/4819

Ovardite, *Italy, Cottian Alps, Piemonte* ophiolite nappe, occurrences in, significance for process of ovarditization, 88M/2940

Oxides, compound crystals from, effects of cation electronegativity differences on enthalpies of formation of, 88M/1988; H, C in solid solution in, 88M/5079; Mn and Fe, struct., topological approach by EXAFS, 88M/5143; nonstoichiometric, detn. of O self-diffusion coefficient in, at high *T, in situ* thermogravimetric method, 88M/3759; sorption of 8-hydroxyquinoline by, 88M/4989; surface characterization using variety of techniques, 88M/4920; surfaces, atomistic simulation of, 88M/5133

Oxygen, effect of O isotopic compn. on non-mass dependent isotopic fractionation in formation of ozone by discharge of O₂, 88M/0510; modelling atmospheric O₂ in global sedimentary redox cycle, 88M/0600; models for C, S cycles, atmospheric O,

application to Palaeozoic geol. history, 88M/2284

isotope fractionations, application of increment method in comparison with experimentally derived, calculated, 88M/5525

Oxyhydroxides, oxides, struct., topological approach by EXAFS, 88M/5143

Ozone, effect of O isotopic compn. on non-mass dependent isotopic fractionation in formation of, by discharge of O₂, 88M/0510; effect of *P*, excitation energy on isotopic fractionation in formation of, by discharge of O₂, 88M/0511

Pabstite, USA, California, Santa Cruz, Kalkar quarry, occurrence, 88M/3168

PACIFIC OCEAN, anomalous features, doubts about sea floor spreading, 88M/6298; Cd in Fe-Mn nodules, 88M/2181; circum-Pacific map project, status update, 1987, 88M/6494; circum-Pacific suspect terrains and lost microcontinents, Mesozoic global plate tectonics, 88M/6496; correlation of ²¹⁰Pb removal with organic C fluxes, 88M/4107; Cu, Au and subduction, trans-Pacific perspective, 88M/5231; evidence from en-echelon cross-grain ridges for tensional cracks in Pacific plate, 88M/3180; hypothesis for Australian-Canadian connection in late Proterozoic, and birth of, 88M/6500; Mesozoic basalt, geochem., 88M/2249; Mn nodules, rare and dispersed elems. in, 88M/0653; Mo in ferromanganese nodules, 88M/5728; periodic trends in elem. enrichments in ferromanganese nodules, role of lattice energies, 88M/5837; processes controlling heavy metal distribn. ferromanganese nodules, crusts, 88M/3517; sulphide deposits, review, 88M/5235; TEM observation of smectitepalygorskite transition in deep marine sediments, 88M/1747; central, Mn nodules, observations, 88M/2995; morphol. of seamounts, implications for Mn-crust mining, 88M/5228; equatorial N, formation of manganese nodules, 88M/3518; DOMES Site A, chem., mineralogy of haloed burrows in pelagic sediment, 88M/0781; ferromanganese nodules, REE geochem., 88M/2327; Valdivia 13/2 area, Mn nodules, distrib., geochem., 88M/0655; equatorial and S.W., REE, minor elem. distribn. in Mn nodules and sediments, 88M/2326; central equatorial, Eocene-Oligocene metalliferous sediments, geochem., origin, 88M/0778; E equatorial, effect of bioturbation, adsorption gradients on solid and dissolved Ra profiles in sediments, 88M/0779; tropical, gaseous Hg profiles, 88M/5836; N, Acantharian fluxes, Sr to chlorinity ratios, 88M/2397; Chernobyl radioactivity found in mid-water sediment traps, 88M/5338; deep-water circulation deduced from Si-O diagrams, 88M/2395; W in, 88M/4108; NE, petrol... evolution, 88M/6268; NE, Gorda Ridge, evidence for high-T hydrothermal venting, 88M/4109; NE margin, feldspathic and mafic sediments, petrogr., geochem., 88M/1444; E, O isotopic compn. of basalts from young spreading axes, 88M/3961; E tropical N., steroid geochem. in O minimum zone, 88M/4148; SE, seamount abundances, distribns., 88M/4619; S, Island states, well water quality, 88M/0829; SW, bedrock and placer min. exploration, geochem. data, geostatistical evaluation, 88M/2124; buserite in ferromanganese crust, 88M/1034; island arcs, basins, tectonic 88M/6295: development, evolution and exhalative ores, 88M/5230; upper mantle processes, petrol., 88M/6297; tropical SW, 'insular' phosphorite on submerged atolls, 88M/5303; W, noble gas elem., isotopic abundances in deep-sea trenches, 88M/5834; W Central, Kiribati and Tuvalu region, ferromanganese deposits, geochem., 88M/3880; NW, continental crust under, 88M/3175; Daito ridge and basin province, DSDP sites 445, 446, zeolites in sandstones, chem., origin, 88M/6347; Aleutian and Pacific Ocean island arcs, depths, water content of magma chambers, 88M/1284; Austral Is., tr. elem. evidence for origin of ocean island basalts, 88M/5658; Celebes Basin, deep methane ³He anomalies, 88M/2393; maxima, Circum-Pacific, volcanoes and volcanic risk, 88M/6263; Circum-Pacific belt NW segment, continental rim metallogeny, 88M/5604; Clarion Is., and USA, Texas, Trans-Pecos magmatic province, geochem. comparison of alkaline volcanism in oceanic, continental settings, 88M/4435; Clarion-Clipperton fault zone, ferromanganese concretions, min. compn., internal texture, 88M/3878; S Cook Group islands, occurrence of orders of soil taxonomy, 88M/0218; Cook Is. and Tonga, urease, phosphatase, sulphatase activities of soils, 88M/5059; Costa Rica Rift, DSDP Hole 504B, 88M/3786; Diato Ridge, isotopic aspects of thermal, burial diagenesis of sandstones, 88M/0780; E Pacific Rise, axial summit graben, cross-sectional shape as indicators of axial magma chambers and recent volcanic eruptions, 88M/6296; diversity, spatial zonation of volcanic rocks, 88M/1398; DSDP Leg 92, metalliferous sediments, REE geochem., 88M/5601; metalliferous sediments, DSDP samples, 88M/2325; non-aromatic hydrocarbons in hydrothermal system, 88M/2440; ore formation at rapidly diverging plate margins, cruise GEOMETEP 4, 88M/3558; REE in metalliferous sediments, 88M/0777; tridymite, cristobalite in andesite from 3400m depth, 88M/2909; 12°50'N, compn. of sulphide ores, 88M/5600; hydrothermal vent waters, isotopic compn., gas concentration, 88M/2394; 20°S, scavenging of U, 230Th, 231Pa during pulse hydrothermal activity, 88M/5730; seamounts near 21 N, hydrothermal sulphide, oxide deposits, 88M/0654; Endeavour Ridge, radiochem. constraints on crustal residence time of submarine hydrothermal fluids, 88M/5531; S Explorer Ridge, real-time mapping of hydrothermal plumes, 88M/2180; Fiji region, geodynamic, geochem. evolution, 88M/6302; French Polynesia, Co-rich ferromanganese nodules, crusts, characteristics, 88M/2324; Futuna and Alofi islands, submarine tholeiite formations, petrogr., min., 88M/6264; Galapagos Is., structl. controls on morphol, of shield volcanoes, 88M/4594; Galapagos Rift, central valley of spreading centre, sediments from hydrothermal field, chem., min. anals., 88M/2341; Cocos/Nazca plate boundary, ore paragenesis of recent hydrothermal deposits, 88M/3561; Guam, temporal variation of isotope, REE abundances in volcanic rocks, implications for evolution of Mariana Arc, 88M/5660; Hawaiian Exclusive Economic Zone, Necker Ridge area, extractive metallurgy of ferromanganese crusts, 88M/3559; Hawaiian plume, dynamic geochem., 88M/5664; Hawaiian Ridge, volcanic rocks from seamounts near, petrol., geochronol., implications for propagation rate of ridge, 88M/2949; Hawaiian-Emperor volcanic chain, geol. evolution, 88M/1334; stratigraphic framework, 88M/1335; Juan de Fuca Ridge, cataclysmic hydrothermal venting, 88M/3177; characteristics of hydrothermal plumes from two vent fields, 88M/5835; classical chem. anal. of forms of bound S in massive sulphides, application to chimney samples, 88M/2498; comparison of multielem, analytical techniques applied to massive sulphide deposits and sulphide standards, 88M/2497; Juan Fernandez Is., geochem. evolution, 88M/3960; Kermadec Ridge, Rumble seamounts, petrol., 88M/6265; Kiribati, S Tarawa, soil sequences, descriptn., 88M/0213; Lau Basin, Valu Fa Ridge, compn. of back-arc basin volcanic rocks, evidence for slab-derived component in mantle source, 88M/0684; Loihi Seamount, noble gases in hydrothermal plumes, 88M/5822; Mariana forearc, boninite- and tholeiite-series volcanic rocks, geochem, characteristics, role of incompatible elem.-enriched fluid in arc petrogenesis, 88M/4424; Mariana Trench, boninite series volcanic rocks, petrol., geochem., 88M/5659; Mariana, Yap and Palau trenches, volcanic rocks. geochem., bearing on tectono-magmatic evolution of Mariana trench-arc-backarc system, 88M/2252; N Marianas Is., O, S, Sr, Pb isotope variations in volcanic rocks. implications for crustal recycling in intra-oceanic arcs, 88M/0735; E. Mariana Basin, Cretaceous volcaniclastic rocks, primary compn., alteration, origin, 88M/2951; Marotiri Islets, basanite, hawaiite, petrogr., geochem., 88M/2254; Marqueses Archipelago, dredged rock samples, petrogr., geochem., discovery of alkaline volcanism, 88M/1283; Marshall Is., Co-, Pt-rich ferromanganese crusts and assoc. substrate rocks, 88M/3910; Melanesian outer arc, epithermal gold mineralization and late Cainozoic magmatism, 88M/5232; W. Melanesia, delayed partial melting of subductionmodified magma sources, new results from late Cainozoic, 88M/6301; outer Melanesia, and N. Chile, min. deposits, metallogenesis,

comparative review, 88M/5243; Middle

America Trench and Scripps Submarine

Canyon, comparison of microbial gases,

implications for origin of natural gas,

88M/0864; Nauru Basin igneous complex,

petrol., geochem., large-volume, off-ridge

eruptions of MORB-like basalt during

Cretaceous, DSDP samples, 88M/2953;

Nazca-Antarctic plate boundary, tectonics

of, 88M/4853; New Caledonia, gold

mineralization, occurrence, 88M/5229;

lithiophorite, compn., struct., new data,

88M/1078; magnesian soils, restoration of

balance of base exchange complex,

88M/0214; Maré atoll, asymmetric reef

construction, 88M/6346; New Hebrides

back-arc troughs, volcanic rocks, K/Ar

dating, 88M/3243; Niue, soils, classification

by soil taxonomy, 88M/0216; Northeast

Depression, organic matter in ferro-

manganese nodules, 88M/4149; Ontong

Java plateau, deep-seated xenoliths from

thick oceanic lithosphere, 88M/2756;

Pacific Rim, Ag deposits, regional distribn.,

88M/5602; geol., mineralogy resources,

mineralization, economics, congress proc.,

(book), 88M/4969; S isotopes in mins.,

88M/5603; Pacific Islands, clay for

brick-making, study of suitability of soils,

88M/5044; Raivavae Is., volcanic rocks,

petrogr., geochem. study, 88M/1394; Tahiti,

harzburgite xenoliths in basaltic lava, first

discovery, 88M/2950; podzols with gibbsite,

anatase, 88M/3422; Teahitia submarine

volcano, hydrothermal deposits assoc. with

intraplate volcanism, 88M/0651; Tonga and

adjacent Lau Basin, dredged igneous rocks

from N. termination of Tofua magmatic arc,

petrol., 88M/6299; Tuvalu, Funafuti, new

min. records, 88M/6481; US Exclusive

Economic Zone, Horizon and S.P. Lee

guyots, assessment of Co-rich manganese

crust resources, 88M/3560; Vanuatu,

reconnaissance prospecting for gold,

88M/5226; Wilkes Fracture Zone-E. Pacific

Rise Intersection, hydrothermal metallo-

88M/5301; geol.,

88M/2693; Hunza valley, blue spinel, gemstone, 88M/2102; Kohistan arc, amphibolites, geochem., 88M/4062; Malakand Agency, Proterozoic metamorphic rocks, mineralogy, 88M/3086; Swat, amphibolites, petrol., and development of 'Lesser Himalayan' basin, 88M/4061; Swat Kohistan, Deshai, nature, origin of orbicular rocks, 88M/1278; Zhob Dist., Bagh area, ophiolitic ultrabasic-basic

SUBJECT INDEX

Palermoite, *Italy*, *Giogo di Toirano*, phosphate mineralization in Permo-Triassic sequence, 88M/1073

Palladium, USA, Montana, Sanders County, in mafic dyke, 88M/5292

Palygorskite v. clay minerals

rocks, 88M/2948

PANAMA BASIN, benthic decompn. of organic matter at deep-water site, 88M/0865 Pantellerite, *Mongolia*, geochem., origin, 88M/2854

Panunzite, *Italy, Mt. Somma-Vesuvio*, new min., 88M/6094

Papagoite, struct. refinement, 88M/3464

PAPUA NEW GUINEA, chromite resources, geol., 88M/5206; deerite, occurrence, 88M/0995; development of micromorphol. features in relation to min., chem. props. of volcanic ash soils, 88M/0196; new tectonic framework, implications for cessation of spreading in back-arc basins, 88M/6498; Pt-group metal deposits, exploration techniques, 88M/5930; Ambitle Is., epithermal gold mineralization, 88M/5267; Bougainville, prelim. crustal model, 88M/6133; D'Entrecasteaux Is., Wapolu gold prospect, hydrothermal models for Au mineralization, 88M/5262; Mt. Fubilan, Ok Tedi project, Cu sulphide porphyry mineralization, with Au, Mo, 88M/5271; Lake Murray, tr. metal fractionation in sediments, 88M/2320; Lihir Is., Ladolam, gold deposit, geol., 88M/5270; Misima Is., structurally controlled epithermal mineralization assoc. with carbonate and Mn oxides, 88M/5269; E. New Britain, Wild Dog, Au-Ag-Cu deposit, discovery, exploration, 88M/5268; Panguna, porphyry Cu/Au mine, geol., resource estimation of, 88M/5263; Porgera gold deposit, exploration, 88M/5266; Ritter volcano, 1888 slope failure, large-scale volcanic cone collapse, 88M/4585; Woodlark basin, volcanic rocks, petrol., 88M/6248; W. Woodlark basin, potential analogue setting for volcanogenic massive sulphide deposits, 88M/5265; Woodlark Is., gold mining history, 88M/5264; volcanic-hosted epithermal mineralization, 88M/5207

Parabariomicrolite, new min. species, structl. relationship to pyrochlore group, 88M/1095; Germany, new min. occurrences, 88M/6475

Parabrandtite, USA, New Jersey, Ogdensburg, Sterling Hill, new min., Mn analogue of talmessite, 88M/1096

Paragneiss v. gneiss Paragonite v. mica

PARAGUAY, basic dyke swarms assoc. with Mesozoic rifting, 88M/6226

Parakeldyshite, powder X-ray data, 88M/3454

Paralstonite, *USA*, *Illinois*, occurrence, fluorescence of, 88M/6480

Paraotwayite, Western Australia, Pilbara region, new Ni hydroxide min., 88M/4343

Pararealgar, Germany, Black Forest Wittichen, occurrence, 88M/3163

Pargasite v. amphibole

Parthéite, Turkey, Taurus Mts., IR spectrometry, 88M/2549

Particle size analysis, techniques, review, 88M/4919

Paulmooreite, named after P. B. Moore, short biogr., 88M/6483

Pavonite, phase relations in systems Ag₂S-Cu₂-PbS, Ag₂S-Cu₂S-Bi₂S₃, 88M/2044; phase relations in systems Cu₂S-PbS-Bi₂S₃, Ag₂S-PbS-Bi₂S₃, 88M/2045

Pearl, clutured black, gem trade notes, 88M/5519

Peat, gaseous diffusion through, 88M/0188; ²H/¹H ratios in sequence with variable plant compn., palaeoclimate anal., 88M/5907; ²¹⁰Pb dating ombrotrophic, gamma-assay, 88M/4865; S in, 88M/2404; studies of, as input to coalification, polysaccharides in peats, 88M/5897; studies of, as input to coalification, sampling sites, prelim. fractionation, 88M/5898; Canada, British Columbia, Fraser River Delta, humid-temperate, S, low T ash, minor elems. in, 88M/4047; USA, Florida, Everglades, sawgrass, early diagenesis of organic matter in, 88M/2451; Maine, Cranberry Is., relationship between and depositional envts.. 88M/1977; Mississippi Delta, sedimentary, botanical factors influencing accumulation, 88M/4160

— bog, USA, Pennsylvania, mountain top, atmospheric chems. deposited on, historical perspective, 88M/1980

 deposits, interpn. of characteristics of coal seams from chem., phys., petrogr. studies of, 88M/2405

 mining, USA, New York, comparison of bulk and elutriate test data, leachability of selected tr. elems., 88M/1978

Pegmatite, mineralized, gas-liquid inclusions in mins. from, 88M/2242; Afghanistan, Pamir and Hindu Kush, Ta in tourmalines from, 88M/5552; SW Africa, tin-bearing granite, precursor magma of, 88M/4497; Antarctica, Byrd Glacier area, Mt. Madison, Li-bearing, and Bi-Sb-Pb-Cu bearing veinlets, 88M/0386; Western Australia, Green Bushes, dispersion anomaly in pisolaterite above concealed ore deposits, 88M/0879; Brazil, Minas Gerais, Urucum, rare mins. from, 88M/2618; Bulgaria, Central Rhodopes, migmatitic, REE in orthites from, 88M/2129; China, Inner Mongolia, Tianpishan, H, O, C isotope studies on genesis of, 88M/2241; India, Bihar mica belt, petrol., mode of emplacement of four granitic plutons in pegmatite dist., 88M/2858; S. Karnataka, rare metal-bearing, occurrence, descriptn., 88M/3550; Kerala, chrysoberyl, petrol., geochem., 88M/2238; Portugal, Covide, magmatic petrogenetic model, 88M/4451; Sri Lanka, Pattara, chrysoberyl-bearing,

genesis, 88M/5731 Pahasapaite v. zeolite

overview,

PAKISTAN, unit cell dimensions of uraninites, 88M/2611; N, age, nature of carbonatite emplacement, 88M/4900; Attock Dist., Kala Chitta Range, min. study of industrial utilization of bauxitic clays, 88M/1756; Azad Kashmir, Barian-Kundul Shahi area, metasedimentary rocks, petrogr., 88M/3098; Baluchistan, Chagai calc-alkaline magmatic belt, comparison of hydrothermal alteration in porphyry Cu mineralization, 88M/1864; N.-central Chagai belt, petrol., petrochem. study, tectonic implications, 88M/2947; Dashte porphyry Cu-Mo prospects, paragenetic, petrochem. study of K-silicate alteration, hypogene mineralization of, 88M/1865: Saindak area, xenothermal alteration and W mineralization, 88M/1921; gneisses, petrol., Central Himalaya, Jogabunj-88M/4738; Dir Dist., petrogr., geol., Sadigabanda area,

88M/2104: USA. Colorado, Larimer County, Crystal Mountain dist., mins. from, 88M/4834; Maine, phosphate-rich, review, 88M/4827; Oxford County, four pegmatite min. localities, 88M/4828; Maine, Topsham, mins. of, 88M/4829; South Dakota, Bob Ingersoll, REE contents of tourmaline from, 88M/2130; Virginia, deeply weathered, tr. elem. distribn. in soils above, implications for exploration, 88M/0785; Wisconsin, Wausau complex, Proterozoic sanidine, microcline in, 88M/1811; USSR, SW Pamir, variations in chem, compn. of garnets from, 88M/6006; Zaïre, Kivu, Kobokobo, mineralogy, 88M/4493

— fields, rare-alkaline-metal metasomatites of, min. parageneses, anal. of min. equilibria in, 88M/3678; Ghana, regional mineralogical-

geochem. zoning of, 88M/1254

—, granitic, cesplumtantite, new Cs-Pb tantalate from, 88M/1085; Middle Proterozoic, uraninite mineralization in, 88M/2165; China, Fujian province, Xikeng, rock-forming, ore-forming characteristics, 88M/2862; Mozambique, metamict zircon from, 88M/2543; Scotland, Outer Hebrides, Garry-a-siar, metasomatic phenomena adjacent to, 88M/1449

 intrusion, Scotland, Scourian complex, crystallization of melts and Inverian retrogression, 88M/4703

 process, role of liquid-immiscibility differentiation in, 88M/0463

—, rare-metal, Zn-bearing tourmalines from, 88M/4249

Pelitic rocks, skarn formation in, 88M/3812; swelling behaviour of, exptl. investigations for assessing influence of min., sedimentological factors, 88M/4798; very low grade, min. domains in, 88M/4683; W Alps, Sesia zone, eclogitic, garnet-chloritoid equilibria in, bearing on phase relations in high P metapelites, 88M/6397; N Wales, lowgrade, chloritoid from, 88M/6386

 system, exptl. detn. of fluid-absent melting relations in, consequences for crustal

differentiation, 88M/5375

Pentlandite, Japan, Iwate Pref., Kamaishi mine, in Cu sulphide ores, compositional variation, 88M/1047

Peperite, variation in textures assoc. with differing host-sediment props., 88M/4603

Perhamite, named after Frank Croydon Perham (1934–), 88M/4841

Periclase, and wüstite, bulk moduli comparative study, 88M/1517

—, magnesiowüstite, solid solution series, in equilibrium with metallic iron in *T* range 1050–1400 K, activity–compn. relations, 88M/5408

Peridot v. olivine

Peridotite, anhydrous partial melting at 10 kbar, implications for origin of primitive MORB glasses, 88M/3640; garnet, thermobarometry for, detn. of thermal, compositional struct. of upper mantle, 88M/2759; lithospheric, metasomatic, enrichment processes in, effect of asthenosphere—lithosphere interaction, 88M/3016; mantle, alpine-type, H₂O-CO₂ fluids in, electron petrol. of relic fluid

inclusions in olivines, 88M/4608; mantle, grain-boundary enrichment of incompatible elems. in, 88M/5619; mantle-derived magma, roles of variable source peridotite and variable C-H-O fluid compns., 88M/0473; measurement of reduced peridotite-C-O-H solidus, implications for redox melting of mantle, 88M/5400; melting at uppermost lower-mantle condns., 88M/0468; spinel, estimation of least depleted, on basis of olivine-spinel mantle array, 88M/2193; Japan, Hokkaido, Horoman ultramafic complex, highly refractory, petrogr., 88M/1281; South Africa, majorite fractionation recorded in geochem., 88M/5639; Spain, passive continental margin off Galicia, plagioclasebearing, lithol., struct., 88M/6284; Ronda, origins of mafic, ultramafic rocks in, 88M/4474; USA, California, serpentinized, probable low-P intrusion of gabbro into, 88M/1295

— nodules, USA, Arizona, Peridot Mesa, spinel, tr. elem., isotopic geochem., 88M/3972; South Africa, Kimberley, evidence for mantle metasomatism in, 88M/3015

— xenoliths, composite, processes of mantle metasomatism, constraints from observations of, 88M/4417; southern Africa, high-, low-T garnet, poss. relation to lithosphere—asthenosphere boundary beneath, 88M/2760; France, Massif Central, in basalts, textural, geophys. evidence for asthenospheric diapirism, 88M/2770; Japan, Shingu, in lamprophyre, petrol., implications for origin of Fe-rich mantle peridotites, 88M/4505

Perloffite, South Australia, Spring Creek Cumine, occurrence, 88M/6083

Permian-Triassic boundary, events near, 88M/2288; S. Alps, gradual C isotope shift at, 88M/4021

Perovskite, calorimetric study of high-P phase transitions among CdGeO₃ polymorphs, 88M/0551; elasticity, equation of state, 88M/4763; electrical conductivity at lower condns., 88M/4764; kimberlites, alnöites, ion microprobe detn. of REE in, 88M/5564; orthorhombic, struct., space group, 88M/3494; partitioning of Fe within high-P, evidence for unusual geochem. in lower mantle, 88M/3461; silicate, new, 88M/3730; superheating, melting, vitrification through decompression of high-P mins., 88M/3707; Czechoslovakia, Bohemia, Osečná complex. from melilite rocks, 88M/4292; Italy, Latium, occurrence, 88M/4819

Perroudite, Western Australia, Coppin Pool, crystal struct., crystal chem., 88M/3501; France, Var, Cap-Garonne, and Australia, new sulphide-halide of Hg, Ag, 88M/4345

PERU, epithermal precious and base metal vein-type deposits, comparison of rock geochem. and min. alteration as exploration guides, 88M/2486; mantle-derived He in hydrothermal ore deposits, 88M/2190; N., morphol. of Wadati-Benioff zone and

volcanism, 88M/4854; Andean continental margin, seabeam and seismic reflection imaging of tectonic regime of, 88M/4852; Cordillera Blanca batholith, granite intrusion, relation of crustal thickening to peraluminosity, 88M/4457; Macusani, obsidian glasses evidence of chem. fractionation in peraluminous magma, 88M/1223; Quiruvilca, baumhauerite-like mineral, occurrence, anals., 88M/2632; Cu-Pb-Zn-Ag lodes, geol., mineralization, alteration, zoning, 88M/5295; Tambo Grande, sulphide deposit, history of discovery, 88M/3601

Petroleum v. hydrocarbons

Phase diagrams, for Mg₂SiO₄-FeSiO₄, MgSiO₃-FeSiO₃ quasibinary systems, 88M/3719; system NaAlSiO₄-KAlSiO₄-SiO₂H₂O at PH₂O = 5kbar, 88M/0450; P-T-compn., 3 computer programs to calculate, 88M/0433; P-T-compn., GEO-CALC: software for calculation, display of, 88M/0431

— equilibria, and compound formation in system LiGaSiO₄–SiO₂, 88M/3732; and liquid struct. in system NaAlSiO₄–CaMgSi₂O₆–SiO₂, effects of F on, 88M/5390; and structl. species in MgF₂–MgO, MgF₂–CaO, MgF₂–Al₂O₃ systems, 88M/5405; in system CO₂–N₂, 88M/5349

— quantification, anal. of min. samples using combined instrument (XRD, TGA, ICP)

procedures for, 88M/0074

— relations, in silica rich area of system Li₂O–SnO₂–SiO₂, 88M/0451; subsolidus, in system Na₂O–ZrO₂–SiO₂, 88M/3728; ultrahigh-*P*, in system Mg₂Si₄O₁₂–Mg₃Al₂Si₃O₁₂, 88M/3726; in FeO–MgO–SiO₂ system, 88M/5450

Phenakite, electron density, electrostatic potential, 88M/0246; electron-density distribn., electrostatic potential in, XRD study, 88M/1792; high-T crystal chem., 88M/1513

Phengite v. mica

PHILIPPINE SEA, Mariana arc, Parece Vela Basin, geochem. evidence for sundering in Miocene ash, 88M/2253

PHILIPPINES, kaipohan: apparently nonthermal manifestation of hydrothermal systems, 88M/1459; recent enrichment events in sources of arc magmas, Sr, Nd isotopic evidence, 88M/5663; S isotope reconnaissance of porphyry Cu and mantotype deposits, 88M/2191; Sr isotopic, tr. elem. variations in Oligocene to Recent igneous rocks, evidence for Recent enrichment in sub-Philippine mantle, 88M/3958; W., E., volcanic rocks, Pb isotopic compns., presence of Dupal isotopic anomaly, 88M/2255; Davao del Norte, Masara mine, geol., ore deposits, 88M/5290; island arc, Cordon syenite complex, undersaturated potassic igneous centre, 88M/1396; island arc, Paracale intrusion, trondhjemite intrusion, geol. setting, petrogenesis, 88M/1397; Luzon Is., recent enrichment in source region of arc s, Sr, Nd isotopic evidence, 88M/5662; Luzon, Zambales ophiolite, oceanic magmas with alkalic characteristics, evidence from basal cumulates, 88M/4423; W central Luzon arc, recognition of contrasting magmatic processes using SB-systematics, 88M/5661; W central Luzon Is., Dizon, gold-rich porphyry Cu deposits, 88M/5288; Negros, geochem. characterization of epithermal alteration, 88M/2474; Central Palawan, chromitite deposits, systematics, 88M/2179; Puhagan geothermal field, microearthquakes, induced seismicity, 88M/1331; Surigao del Norte, Siana Au-Ag deposit, geol., ore genesis, 88M/5289

Philipsburgite, England, Cumbria, Caldbeck Fells, IR spectra, 88M/6078

Phlogopite v. mica

Phlogopitite, *Brazil, Bahia, Campo Formoso* and *Carnaiba*, assoc. with granites, 88M/1463

Phonolite, *Brazil, Piratini*, petrol., geochem. studies, 88M/6223; *USA, Texas, Balcones province*, Cretaceous, petrogenesis, 88M/4433

Phosgenite, Scotland, Grampian Region, Lossiemouth, first Scottish occurrence, 88M/6467

- Phosphate, and noncrystalline Al, Fe hydroxides, influence of relative humidity on reaction products of, 88M/0142; and related mins., crystallogenetic trends in rational systematics of, 88M/0622; Ca, Mg, precipitated from solutions of high to medium concentrations, initial phases of, 88M/2055; field method for phosphate retention, 88M/4978; min. phase in bone, poss. linkage to organic matrix by protein-bound phosphate bonds, 88M/1071; ocean-floor biogenic, REE in, 88M/4002; USA, North Carolina continental shelf, potential for marine mining of, 88M/1933
- deposits, Togo, Dahomeyide orogenic belt, Bassar, Proterozoic, geol., 88M/3612
- grains, sedimentary, U, Th, Zr, Hf, REE distribn. in, 88M/0759
- mineralization, 88M/2656; Italy, Giogo di Toirano, in Permo-Triassic sequence, 88M/1073
- minerals, Ca₃(PO₄)₂, dense polymorph of, struct., crystal chem., host to accommodate large lithophile elems. in Earth's mantle, 88M/5160; KCu₄(PO₄)₃, hydrothermally synthesized, crystal struct., 88M/5163; Belgium, Namur province, Haut-le-Wastia, secondary, occurrence, anals., 88M/4334; Portugal, Mangualde, occurence, 88M/6081; USA, South Dakota, Black Hills, Tip Top mine, descriptns., 88M/2654; Zambia, Kabwe, Zn-, IR spectroscopy, 88M/2651
- nodules, off E. Australia, sea-floor weathering, effect on U oxidation state, isotopic compn., 88M/2321
- ore, sedimentary, *Thailand*, robertsite in, 88M/6079
- rocks, USA, Idaho, Conda mine, alteration stages in, cathodoluminescence study, 88M/2188
- Phosphorite, animals and mineralization of P, ore-forming mechanism of, 88M/0623; concretionary, microstructs., genetic characteristics, 88M/6339; formation in

- upwelling zones, 88M/0637; *India*, Proterozoic, geochem., 88M/4398; Proterozoic, petrol., 88M/4397; *Andhra Pradesh, Cuddapah Basin*, occurrence, descriptn., 88M/4399; *W. coast*, radiometric ages, 88M/3229; *tropical SW Pacific*, 'insular', on submerged atolls, 88M/5303
- deposits, England, Yorkshire, Speeton, Cretaceous, min., petrol., 88M/1413; USSR, Malyy Karatau basin, Dzhanatas deposit, V, Cr, Ni, Zn, Pb, As geochem., 88M/5714
- formation, modern, U in process of, 88M/4029
- geochemistry, isotopic evidence for meteoric alteration of francolite on local scale, 88M/3998
- Phosphorus, animals and mineralization of, ore-forming mechanism of phosphorites, 88M/0623; extraction-spectrophotometric detn. of tr. P in Cr-bearing materials, 88M/0078; in coastal marine sediments, distribn., dissolution of several forms of, 88M/4038; organic, in marine sediments, 88M/5893; *Indian Ocean*, in sediments, 88M/0774
- Phosphuranylite, *Portugal*, *Mangualde*, occurence, 88M/6081
- Phyllonites, preferred orientation of phyllosilicates in, 88M/2728
- Phyllosilicate minerals, orbital interactions in, perturbations of idealized two-dimensional, infinite silicate frame, 88M/5109; *Japan, S. Kitakami Mts.*, grain growth, re-orientation of, during development of slaty cleavage, 88M/6369
- Phyllosilicates, absence of evidence for Ni²⁺/Si⁴⁺ substitution in, 88M/3382; growth, deformation defects, HRTEM study, 88M/0254; preferred orientation of, in phyllonites and ultramylonites, 88M/2728; USA, California, Point Sal ophiolite, compositional, structl. variations of, 88M/6032; Salton Sea, in geothermally altered shales, microstructs., formation mechanisms, depth-zoning of, 88M/6373

Pickeringite, *Italy, Tuscany, Cetine mine*, occurrence in oxidation zone, 88M/1059

Picrite, Canada, Lake Nipigon, Middle Proterozoic, petrol., 88M/1286; S India, mantle xenoliths in, 88M/2860; USA, Hawaii, Mauna Loa and Kilauea, petrol., 88M/6204

Piemontite v. epidote

Pigeonite v. pyroxene

- Pinakiolite, Sweden, Långban, Sb-rich, new structl. variety, 88M/6068
- group, blatterite, *Sweden, Nordmark*, new Sb-bearing Mn²⁺~Mn³⁺ member of, 88M/4337

Pitchblende v. uraninite

Placer deposits, magnetic, USA, Alaska, Goodnews Bay dist., Pt-group elems. in, 88M/0359

Plagioclase v. feldspar

Plagiogranite, Costa Rica, Nicoya ophiolite complex, high, low level, petrogenesis, 88M/4460; Cyprus, Troodos ophiolite, U/Pb dating, 88M/3219; France, Alps, Chamrousse ophiolite complex, 496 m.y. age, evidence of Lower Palaeozoic oceanization, 88M/4886; Italy, Sasso di

Castro ophiolite, geol., petrol., 88M/2939; Sinai, Tarr albitite, metasomatic, from mainly non-intrusive protoliths, 88M/2944

Plagionite, Wales, Deganwy, Bwlch mine, occurrence, 88M/6066

- Planetary studies, evolutionary framework for Jovian, Saturnian satellites, 88M/4206; formation of 'magma ocean' on terrestrial planets due to blanketing effect of impact-induced atmosphere, 88M/4192; interstellar polycyclic aromatic hydrocarbons and C in interplanetary dust particles, 88M/0956; isotopic abundances, inferences on solar system, planetary 88M/3785; evolution. magnetism, 88M/5951; mechanisms, observations for isotope fractionation of molecular species in planetary atmospheres, 88M/4194; Mn-Cr isotope systematics and development of early Solar System, 88M/4193; morphol., chem., min. studies of cosmic dust, 88M/5953; origin of dust in solar system, 88M/5992; refractory interplanetary dust particles, 88M/2513; solar nebula, primitive, condensation, evaporation, melting, crystallization in, exptl. data in system MgO-SiO₂-H₂, 88M/5383; struct. of Phaethon, detonation of icy envelope, 88M/4205
- ——, comets, nature of, 88M/5993; review of cometary sciences, 88M/5986; Giacobini-Zinner, ICE observations, 88M/5991; Halley, Earth-based observations of Halley dust, gas, 88M/5988; evidence for chain molecules enriched in C, H, O in, 88M/0960; first polymer in space identified in, 88M/0961; gas compn. derived from space missions, 88M/5990; Giotto observations of Halley dust, 88M/5989; history, 88M/5987; Wilson, discovery of organic grains in, 88M/2512
- —, Ganymede, compositional anomaly of Ganymede, Callisto among ice satellites, inferred from impact crater morphol., 88M/4204; dome craters on, 88M/5952; geol. of large impact craters on, implications on thermal, tectonic histories, 88M/4202; pedestal craters distribn., implications on thermal, tectonic histories, 88M/4203
- —, Mars, and Earth, comparative anal. of volcanic impact on climates of, 88M/4195; comparison of knobs on Mars to isolated hills in æolian, fluvial, glacial envts., 88M/4199; evolution, new view, 88M/4196; Martian fluidized crater distribn., tectonic implications, 88M/4200; measurements of, 88M/4197; poss. tornado-like tracks, 88M/0932; quantity, condn. of underground water, 88M/4198; release of juvenile water, estimated amounts, timing assoc. with volcanism, 88M/0933
- —, Neptune, origin of Triton, 88M/4209
- —, Pluto, surface compn. of Charon, poss. presence of water ice, 88M/2514
- —, Uranus satellites, simple two-layer model for, 88M/4201
- —, Venus, circular structs. on plains as indicating geol. history, 88M/0935; Cleopatra Patera, Venera 15/16 evidence for volcanic origin, 88M/4207; geol. of

Control of the contro

southern Ishtar Terra/Guinevere, Sedna Planitae region, 88M/4208; phys., chem. modification of surface by windblown particles, 88M/0934

Plate tectonics, back-arc spreading in theoretical approach, Proterozoic, 88M/1110; driving force of plate motions, 88M/4796; in situ measurements of near surface stress fields adjacent to consuming plate boundaries, 88M/6134; incipient spreading within Nazca plate, consequence of subduction along Peru trench, 88M/6497; Mesozoic global, circum-Pacific suspect lost microcontinents, terrains and 88M/6496; new Nazca reconstructions, implications for intermontane basin evolution in Andes, 88M/6495; secular cooling of Earth as source of intraplate stress, 88M/1550; Gulf of Suez and Dead Sea Rift, mineralization related to rift systems, 88M/1886; Andean continental margin off Peru, seabeam and seismic reflection imaging of tectonic regime, 88M/4852; Baltic Shield, role of komatiites in, evidence from Archaean, early Proterozoic crust, 88M/2673; Canada, New Brunswick, Tetagouche group, tectonic setting, implications for plate tectonic models of N. Appalachians, 88M/2268; China, summary of lithospheric dynamics, 88M/1590; Tongbai-Dabie collision type orogenic belt, large thrust-décollement struct., evolution, 88M/4856; Ecuador and N. Peru, morphol. of Wadati-Benioff zone and volcanism, 88M/4854; central Japan, two overlapping plates subducting beneath, revealed by Sr isotope data, 88M/0683; plate boundary, Nazca-Antarctic 88M/4853; New Zealand, asymmetric back-arc spreading, heat flux, struct. assoc. with Central Volcanic Region, 88M/4777; island arc tectonics manifested in He isotope ratios, 88M/0734; N Norway, tectonic model for evolution of Finnmarkian Caledonides, 88M/1128; Pacific, anomalous features, doubts about sea floor spreading, 88M/6298; SW Pacific, island arcs, basins, tectonic development, 88M/6295; Papua New Guinea, and Caroline plate, new tectonic framework, implications for cessation of spreading in back-arc basins, 88M/6498; USA, passive margin of, 88M/4849; Califoria, and Mexico, Baja California, continental margin, 88M/4855; New England fold belt, model for Carboniferous evolution, 88M/2697; W USA, evolution of, 88M/4850; tectonically active margin, 88M/4851

Platinum, and Pt-10¹⁰/_w Rh alloy, thermophys. props. at high *T*, 88M/0517; behaviour during Cu sulphide crystallization under hydrothermal condns., 88M/5427; phys. props. of Os, Ir, Ru, Pt cubic solid solutions, 88M/4770; thermocouple calibrations, intercomparison of, 88M/3714; *USA*, *Montana*, *Sanders County*, in mafic dyke, 88M/5292; *Wyoming*, geol., occurrence of critical strategic metals, 88M/3563

— deposits, stratiform, new data, concepts, 88M/3509 - group elements, behaviour during fractional crystallization, partial melting, special ref. to compn. of magmatic sulphide ores, 88M/3859; deposits, formation in layered intrusions, 88M/1195; Eh-pH diagrams (25°C, 1 bar) in systems M-O-H-S, applications, 88M/5384; geochem. exploration, (book), 88M/4968; in ultrabasic rocks, min., geochem., 88M/3900; in ultramafic magmas, influence of O, S fugacities on differentiation of, 88M/0464; thermodynamic calculations of volatility of, 88M/3688; Canada, Ontario, Abitibi greenstone belt, fractionation in komatiites, 88M/0286; USA, Alaska, Goodnews Bay dist., in magnetic concentrates, 88M/1020

metals, anal., overview, 88M/3298;
 international strategic mins. inventory
 report, 88M/0296; New Zealand,

occurrence, 88M/5225

— minerals, in alkaline-ultrabasic massifs, 88M/1019; compositional variations, reflectance of, 88M/1018; *Italy, Ivrea-Verbano*, from sulphide deposits, 88M/2629

— mineralization, new type, isoferroplatinum, 88M/0285; new type, Ni-Cu tetraferro-

platinum, 88M/0285

— -palladium deposits, USA, Montana, Stillwater complex, Picket Pin, investigations, 88M/0389

Plutonic environments, shallow, U, Th redistribn. in, 88M/3971

rocks, N. Arabian shield, Qufar quadrangle, Al'Awshaziyah quadrangle, late Proterozoic volcanic and mafic, geochem. reconnaissance, 88M/0721; Bulgaria, Kapitan-Dimitrievo pluton, petrol., geochem., 88M/1250; Canada, Ontario, Deloro igneous complex, felsic, geochem., feldspar mineralogy, 88M/0740; Quebec, Superior Province, Lacorne complex, proposed model for formation of reversely zoned plutons, 88M/6215; Yukon Territory, Emerald Lake pluton, petrol., chem., K-Ar, Rb-Sr, U-Pb study, 88M/2874; *N-central Chile*, petrol., 88M/2879; Japan, Hokkaido, Matsumae complex, petrol., mineralogy, fractional crystallization, 88M/4506; Néouvielle pluton, calc-alkaline, chem., age, 88M/6169; Spain, Central System, Somosierra-Guadarrama Hercynian, δO¹⁸ isotopic relations in, sedimentary origin, hybrid character, 88M/0707; USA, Alabama, Randolph County, Blakes Ferry, petrogenesis, 88M/4522; California, Klamath Mts., isotopic heterogeneity in tilted plutonic system, 88M/0748; Klamath Mts., Wooley Creek batholith, Slinkard pluton, mineralogy, 88M/2878; USSR, systematics of plutons based on natural series of magma rocks, 88M/0727

Plutonism, Algeria, Hoggar, collision-related, structl. aspects, 88M/1253; Chile, southern Cordillera, Cretaceous diapiric, 88M/1657

Plutonium, diffusion, solubility of C in, 88M/0428; N. Atlantic, fallout, geochem., pore water study in shelf, slope, deep-sea sediments, 88M/1952

— isotopes, *N. Atlantic*, fallout, ²⁴⁰Pu/²³⁹Pu ratios, significance, 88M/1953; *NE USA*, ^{239,240}Pu, in estuarine and shelf waters, 88M/3621

Plutons, calc-alkaline, correlation of Al in hornblendes with P of solidification of, 88M/2877; Bulgaria, W. Rhodopes, Dolno-Drjanovo pluton, petrol., 88M/1165

POLAND, geol., mineralization, review, 88M/3165; Kupferschiefer Cu-Ag deposits, origin, presentation of new genetic model, re-appraisal, 88M/3539; low-T ashes of brown coals, min. compn., 88M/4652; midcontinent stratiform Cu deposits, and USA, comparison, 88M/0290; study on kaolin chlorination process for Al industry, 88M/5006; Ti mins. in clay rocks, 88M/0175; use of new decay constants to re-compute K/Ar dates, 88M/0019; SW, Tertiary alkaline volcanism, tr., isotope geochem., 88M/2225; Baranów, stoneware loams, lithol., raw material props., 88M/1770; Bardzkie Mts., Lower Carboniferous limestone, diagenesis, 88M/4650; 'Bełchatów' brown coal mine, tonstein, min., petrogr. features, 88M/1743; Biała Góra region, Tomaszów basin, Neocomian clay rocks, min. compns., 88M/0174; Carpathian foredeep, Sr, Ba in gypsum deposits, 88M/4026; Carpathian Foredeep, study of organic matter, natural gases in Miocene sediments, 88M/5890; Chłapowo, min.-petrogr. characteristics of amber-bearing Eocene sediments, 88M/2978; Chłapowo, origin of amberbearing Palaeogene sediments, 88M/2979; Cracow, Zalas, adularization of plagioclases in rhyodacites, 88M/3023; Dęblin, galena mineralization in Upper Namurian drill hole profile, 88M/3587; Fore-Sudetic Cu deposit, effect of boundary dolomite on formation, mineralization of white sandstone roof, 88M/3586, mineralization of sandstone in, 88M/3585; Jeleniewo region , Suwałki massif, ore mineralization, 88M/1884; Karkonosze massif, sequence of two granitic masses, crystallization T in endocontacts, 88M/4442; Księginki, min., geochem. characteristics of clay weathering product from nephelinite quarry, 88M/3405; Kujawy, Barcin region, Jurassic limestone, silicification, neomorphism, 88M/4651; Łęknica, suitability of fireclays in production of acid-proof materials, 88M/5008; Legnica, Dunino, basaltic weathering waste, min. compn., 88M/0192; Lesna-Mitoszów deposit, basaltic weathering crust as clay casting matrix, 88M/3401; Low and Opole Silesia, Tertiary volcanic rocks, classification, nomenclature. 88M/2899; Lower Silesia, basaltic weathering waste, min. compn., 88M/0193; min. compn., props. of soils in sanitary protection zone around Cu smelters. 88M/5326; origin of muscovite from two-mica granite and enclaves, 88M/4262 significance of chromite chem. to petrogenesis of ultrabasites, 88M/2839 smectites, in basalts, hydrothermal origin 88M/3400; volcanism and development of basaltic weathering waste, 88M/0194

Braszowice-Brzeźnica massif, Mikołajów, rodingite from serpentinites, 88M/4722; Góry Sowie Mts., Culm fm., analcite, occurrence, 88M/2603; Kalno, processing of kaolin by high-gradient magnetic separation, 88M/5007; Kłodzko region, microtextural segregation of min. phases in marbles, 88M/3077; Nowa Ruda syncline, galena-baryte mineralization, 88M/3540; Piława Górna, quartz syenite, petrogr., origin, autometamorphism of, 88M/4478; Szklary, Ni-bearing ferric analogue of montmorillonite from weathering crust, 88M/3362; Turoszów trough, clay rocks, mineralogy, 88M/1741; Zabkowice Ślaskie, mins, with intermediate struct, chloritevermiculite, origin, 88M/1740; Lower Silesia, Złotoryja and Wądroże Wielkie, detrital native gold, min.-geochem. characterization, 88M/2608; Lubin, boundary dolomite in Zechstein, occurrence, petrogr., genesis, 88M/4649; Cu ore deposits, anisotropy of, statistical study, 88M/0368; Lubin mine, Whiteliegendes sandstones, variability of Cu mineralization, 88M/3584; Lunliniec and Wieruszów, Upper Rhaetian, Lower Jurassic clay sediments, min. study, 88M/0172; Możdżanowo, amber in Tertiary sediments, 88M/2977; Oldrzychowice deposit, dolomite, petrographic variability, 88M/1942; Pieniny Mts., Biała Woda Gorge, harmotome in melabasalt, 88M/2605; Puck Bay region, Zechstein sulphate deposits, min., geochem. anal., 88M/4025; Sokołowsko, relations between chem, of volcanic rocks and groundwater, 88M/0826; Stara Kamienica chain, stratiform tin deposits, sulphide geochem. studies, 88M/2158; Strzegom, magmatic tourmaline, 88M/3024; Sudetes Mts., borehole spectrometric gamma ray measurements in search for Th mineralization, 88M/0907; clay mins. of soils developed on gneisses, 88M/3403; Gierczyn, tin ore deposit, structs., textures of ores, genetic interpn., 88M/1915; NW part of Śnieżnik metamorphic unit, metabasites, petrol., 88M/4727; Szklarska Poreba, Karkonosze, granitic rocks, model of crystallization, stochastic syncline, 88M/1251; N. Sudetic sedimentation of Santonian rocks, potential for clay min. deposits, 88M/0173; Tarnobrzeg, native sulphur deposit, origin, petrogr. studies, 88M/1940; 'Turów' brown coal mine, clays, props. of, suitability for manufacture of refractories, 88M/5009; Silesia, phlogopite Upper lamprophyres, chem. anals., 88M/2579; coal mine, min. 'Szczygłowice' siderite characteristics, origin of concretions, 88M/2646; Upper Silesian coal basin, Cl content of coals, 88M/5702; NE margin of Upper Silesian coal basin, early diagenetic cement in Devonian carbonate rocks, 88M/2980; Wieluh region, epigenetic from Jurassic glauconite-smectite sediments, 88M/3404; Wrocław, clay mins. of gley soil developed on alluvial loams, 88M/3402; Wrocław, Poznah clay deposits, microstructs. of, 88M/0158; Zabierzów,

Palaeogene weathering of marly limestone, 88M/3406; Zarów, 'Andrzej' deposit, influence of chem. parameters on classification, reserves of refractory kaolin, 88M/5019; Zulawy Wislane region, F in groundwater, 88M/5814

SUBJECT INDEX

Pollucite v. zeolite

Pollution, terrestrial, of marine ecosystems, measuring economic damages assoc, with, 88M/3631

Polychlorinated dibenzofurans and dioxins, detn. of part-per-trillion levels in envtl. samples, 88M/0406

Porphyrins, 'di-DPEP' type, fossil, characterization, 88M/2432; in geol. record, 88M/2413

Porphyroblasts, syntectonic, rotation rate vs. growth rate of, 88M/1103

Porphyry dykes, Spain. Sierra

Guadarrama, geol., 88M/1242 PORTUGAL, greisenized granites and metasomatic schist of W-Sn deposits, geochem., 88M/3813; gypsum reserves, review, 88M/1936; igneous rock specimens, data bank, 88M/1246; K-feldspars from granitic rocks, comparison of structl. state parameters, 88M/1005; potential metallic and energy resources, 88M/3533; Sn-W ores and assoc. granites, evolution, 88M/1880; white micas from Sn, W deposits, geochem., 88M/5555; N. and central, calctr.-elem. geochem., silicate rocks, 88M/2348; Portuguese Zone, S. trondhjemites, tonalites, diorites, relations to vulcanites, min. deposits of Iberian Pyrite Belt, 88M/4456; Aljustrel ores, benefication of, 88M/5196; Arouca and Regoufe, granitic stocks, origin, age, 88M/2210; Avô granitic pluton, geol., petrol., chem., 88M/1243; K/Ar dating, 88M/0012; Baixo Alentejo, Montemor-o-Novo-Casa Branca, metal deposits, exploration, 88M/1881; Barroca Grande mine, wolframites, compositional variation in, evidence for fault-controlled ore formation, 88M/6056; Beira Baixa, Serra de Estrêla granitic massif, tectonics, magmatism, hydrothermalism and Sn-W aplite-pegmatite and quartz veins, 88M/1860; Bragança region, clays, limited industrial use, 88M/5017; Caramulo, crystallization model of Hercynian pluton from variations in Li content, 88M/0708; Castelo Branco, Zebreira, granite plutons, petrogr., min., chem. data, 88M/1244, 88M/1245; structl. study, pegmatite, magmatic petrogenetic model, 88M/4451; Estremoz region, metavolcanic rocks, geochem., 88M/2898; geochem., dolerite. Lisbon area. mineralogical transformations in spheroidal weathering, 88M/0800; Macedo de Cavaleiros region, Palaeozoic peralkaline petrogenesis, 88M/4453; rhyolites, Mangualde pegmatite, phosphate minerals, occurence, 88M/6081; Obidos lagoon, sediments, granulometric study, 88M/2974; Sintra igneous massif, weathering profiles, petrogr., min. studies, 88M/2208; St. scarns, petrol., geochem., 88M/1451; Tourem, age of migmatization, 88M/0013; Trás-os-Montes, Macedo de

Cavaleiros area, peralkaline acidic volcanic rocks, Rb-Sr dating, 88M/4612; Três Minas gold mine, geol., geochem. prospecting, 88M/5925; Vila Real, Fe, Mn, Mg behaviour during differentiation of granites and W-Sn bearing hydrothermal activity, 88M/2209

Posnjakite, SW England, and polymorphs, occurrence, 88M/1563

Potash, Canada, New Brunswick, Millstream, lithogeochem. approach to stratigraphical problems, 88M/0870; USA, Wyoming, resources, 88M/1935

Potassium, radiochem, specialization of rocks for K, Th, relation with mineralization, 88M/3841; Sri Lanka, availability of common rocks, for fertilizer, 88M/1934

-- compounds, K₂Si₄O₉, glass, sheet silicate, wadeite-type phases, energetics, vibrational spectra, 88M/2074

- horizons, Canada, Saskatchewan, Prairie Evaporite fm., Rb-Sr, K-Ca isotope systematics in mins. from, 88M/4044

— isotopes, K/Ar dating v. age determination Potosiite, mutual Pb²⁺/Sn²⁺ substitution in sulphosalts, 88M/1055

Pottery, archaeological, Spain, Soria, Agreda, study of, 88M/6485

Pottsite, USA, Nevada, Lander County, new vanadate min., 88M/6095

Powellite, Spain, Montseny Massif. occurrence, chem. anal., 88M/4303

Precambrian era, constant daylength during, 88M/3172; trends, transitions, events in history, calibration, cryptozoic recommendations by Subcommission on Precambrian Stratigr., 88M/3182

Prehnite, heterogeneous, epitaxial nucleation of protein crystals on min. surfaces, 88M/6031

Pressure transducers, intercomparison of P standards up to 500 MPa by, 88M/0424

Pristane/phytane ratio, restricted utility of as palaeoenvtl. indicator, 88M/4121

Protasite, crystal struct., crystal chem., 88M/3496

Protein crystals, heterogeneous, epitaxial nucleation of, on min. surfaces, 88M/6031

Proterozoic-Archaean boundary, Finland, Bothnian schist belt, revision, 88M/2202

Protodolomite, Japan, Minamidaitojima Is., geochem, behaviour of transition metals during formation of, 88M/5722

Pseudobrookite, Algeria, Western Laouni intrusion, inclusions Cr-spinel, in 88M/1021; Italy, Latium, occurrence, 88M/4819

Pseudoleucite, Turkey, Anatolia, Kirşehir batholith, use as P indicator, 88M/1263

Pseudotachylite, fault-generated, vesicles, amygdales, similar structs. in, 88M/2812; Scotland, Malvern Hills, from Precambrian shear zone, 88M/4469; South Africa, Witwatersrand Ventersdorp and Supergroups, assoc. with bedding-parallel fault zone between, 88M/6411

Pumice, France, Massif Central, Neschers, Quaternary, 40Ar/39Ar dating, defeat of xenocrystic contamination, 88M/3209; Mexico, Chiapas, El Chichón Volcano, XRF anals., inter-lab. comparison, 88M/2509;

USA, California, Mt. Shasta, Fe-Ti oxide mineralogy and origin of normal, reverse remanent magnetization in dacitic pumice blocks, 88M/1540; USA, Hawaii, Kilauea Volcano, reticulite, early 19th century, 88M/1340; USA, Washington, Mt. St. Helens, 1982 eruption, crystal clots in, petrol., significant role of Fe-Ti oxide crystallization, 88M/4598; USA, Wyoming, report, 88M/1947

Pumicite, USA, Wyoming, report, 88M/1947
Pyrargyrite, England, Cumbria, Garrigill,
Tynebottom Mine, in Ag-Ni-Co min.
assocn., 88M/1051

PYRENEES MTS., Precambrian late metagranite, major elem. geochem., 88M/3937; central, $W_{\cdot,}$ definition. significance of diff. types of gradients in Hercynian metamorphism, 88M/6393; E., coexistence of paragonite, muscovite, in metamorphic rocks, 88M/4714; E., karstic cavities in dolomite, mineralization of, 88M/4318; E., thermal waters, ¹⁴C dating, 88M/0011; Alta Ribagorza, Cierco deposit, solubility of galena, 88M/3762; Aston massif, Rb/Sr dating, 88M/3212; Bassegoda Mt., stratiform galena-sphalerite-pyrite mineralization, occurrence, 88M/3529; Bassiès pluton, biotite granite, petrol., age, 88M/6167; Lesponne, Hercynian granite massif, structl. study, 88M/4455; Néouvielle pluton, calc-alkaline, chem., age, 88M/6169 Pyriboles, Finland, Orijärvi, southwest,

Pyriboles, Finland, Orijärvi, southwest, triple-, double-chain, mineralogy, 88M/0989

Pyrite, aqueous, oxidation by dissolved O and by ferric iron, 88M/0507; chem. vapour transport of, with halogen (Cl,Br,I), 88M/2039; diagenesis, pyritization of crinoid ossicles, 88M/6350; effects of T, degree of supersaturation on morphol., 88M/3760; formation in Jurassic shales, contrasting biofacies, 88M/1408; in contact aureole of andesite stock, 88M/6364; in mine waste rock dump, effect of rehabilitation on rate of oxidation of, 88M/1960; iron sulphides in metasediments, isotopic support for retrogressive pyrrhotite to pyrite reaction, 88M/3991; minor elem. compns. of, as petrogenetic indicators, 88M/5566; oxidation in carbonate-buffered solution, exptl. kinetics, 88M/5424; oxidation mechanism, acidifying potential around mines, 88M/5323; oxidation, reduction, molecular orbital theory considerations, 88M/3761: Australia. Georgina Basin, in Cambrian marine sediments, 88M/4040; Canada, Ontario, Heron Bay, Hemlo deposit, of distinctive isotopic compn., potential tool to identify gold mineralization, 88M/0869; Northwest Territories, Baffin Is., Nanisivik mine, morphol., 88M/2626; Greece, Peloponnesos, Ermioni Cu-bearing pyrite mines, metallogeny in basic rocks of palaeosubduction area, 88M/1914; North America, isotopic compn., relationship to organic matter type, iron availability in Cretaceous shales, 88M/3990; USA, Illinois Basin, New Albany Shale, C-S-Fe relationships, isotopic compn., 88M/2139;

Kentucky, variation in size, form, microlithotype assocn. in Springfield (No.9) and Herrin (No.11) coals, 88M/1441; Tennessee, Ducktown, Cherokee mine, porphyroblast development, ore metamorphism, 88M/0390; Virginia, Lexington, Barger's quarry, occurrence, 88M/6477; Washington, Robertson Pit, Crescent fm., occurrence, 88M/4833

- crystals, growth mechanism, surface defects in {210} form in, 88M/5147
- mineralization, Turkey, Kizildağ-Elaziğ, features, origin, 88M/3589
- ores, Italy, Tuscany, Niccioleta, alternative interpn., comments, 88M/1861, reply, 88M/1862
- --- chalcopyrite-magnetite mineralization, *Turkey, Kayserilinin Dere*, and Tertiary volcanism, 88M/3542
- -polymetallic deposit, USSR, Rudny Altai, Maleyevskoe, hydraulic structs. in, 88M/0378
- Pyrochlore, Western Australia, Mt. Weld, from carbonatite latite, compositional variation in, 88M/4308
- group, structl. relationship of new min. species, parabariomicrolite to, 88M/1095; France, Beauvoir granite, chem. data, 88M/4305
- Pyroclastic deposits, Guatemala, Atitlán caldera, Quaternary silicic, 88M/2922; Italy, Sicily, Mt. Etna volcano, petrol., 88M/2897; Hungary, in Eocene/Oligocene boundary profiles, mineralogy, petrogr., 88M/1307; Yugoslavia, Croatia, Baranja, and andesites, petrogr., geochem., 88M/6242
- flows, Japan, Ata, depositional ramps, assymetrical distribn. struct., 88M/4579; ground layer of, evidence for capture of lithic fragments, 88M/6247; Hokkaido, Futamata and Tomuraushi, granitic inclusions from, K/Ar dating, 88M/3238; Mexico, Colima volcano, petrol., 88M/1365; USA, Alaska, Katmai, 1912, kinematic, rheological modelling of, 88M/6273; Washington, Mt. St. Helens volcano, generation by hot-rock avalanches from dome, 88M/4596; secondary hydroeruptions in, 88M/1354; trioctahedral vermiculite in, 88M/0184; West Indies, St Kitts, lithic breccias in, 88M/4606
- surges, USA, Washington, Mt. St. Helens, stratified flow in, 88M/1355
- Pyrolite, model compn., pyroxene–garnet transformation in, exptl. study, bearing on constitution of mantle, 88M/0449
- -Na₂O-rich fluid system, implications of expts. on, at 950°C, 20 kbar, for Na-rich metasomatism in upper mantle, 88M/1995
- Pyrolusite, crystallochem. systematics, 88M/0270; *Italy, Sardinia, Corona di Corvu*, destabilization of, 88M/4288
- Pyrolysis/evaporation-gas chromatography, Pristane Formation Index, new molecular maturity parameter, 88M/5914
- Pyromorphite, Germany, Hesse, Altenmittlau, occurrence, 88M/4808; USA, Pennsylvania, Phoenixville, Brookdale mine, occurrence, descriptn., 88M/1583

Pyrope v. garnet

Pyrophyllite, hydrothermal synthesis, props., 88M/0565; shear strength as function of *P*, *T*, relative humidity, 88M/0564; *South Africa, Witwatersrand goldfields*, fluid infiltration during metamorphism, generation of, 88M/6412

- activated complexes and Pyroxene, pH-dependence of rates of hydrolysis, 88M/3731; (Fe,Mg)-, detn. of thermodynamic props, at 1000 K by emf method, 88M/5461; from ultramafic xenoliths, distribn. of tr. transition elems. in, microprobe anal., 88M/2194; incommensurate, crystal struct., 88M/3460; lamellae in oxyhornblende, high resolution observation, electron microscopic 88M/2574; low-Ca pyroxene/melt, T, compn. dependencies of tr. elem. partitioning, 88M/3721; nomenclature of, 88M/6014; oikocrysts, in troctolitic cumulates, evidence for supercooled crystallization, postcumulus modification, 88M/6200; on join Mg₂Si₂O₆-CaMgSi₂O₆, thermochem., 88M/5463; strongly deformed, CaCuGe₂O₆, struct., 88M/5104; ternary, coherent lamellar exsolution in, pseudobinary approximation, 88M/5467; titaniferous, crystal chem. of transitionmetal ions in, 88M/2562; Antarctica, Enderby Land, Fyfe Hills, exsolution in 1000°C granulites. evidence for metamorphic T in Archaean continental discussion, 88M/6016, reply, 88M/6017; Australia, New South Wales, Warrumbungle volcano, Zr-rich sodic, in felsic volcanics, 88M/6020; China. Emeishan, in basalts, study, 88M/6019; France, Massif Central, petrol., geochem. relationships between pyroxene megacrysts and assoc. alkali basalts, 88M/5554; USA, New York, Adirondack Mts., exsolution, indicator of high-P igneous crystallization of quartz syenite gneiss, 88M/6015; two-pyroxene graphical thermometers, exptl. study, application to metaigneous pyroxenes, 88M/2067; USSR, Kachar iron-ore deposits, REE in, 88M/5575
- —, aegirine, Finland, Honkamäki—Otanmäki region, Pikkukallio, in alkali gneiss, 88M/2561
- --, -- augite, crystal-chem. study, evaluations on oxidation state of Mn, 88M/4256; unusual occurrence in oceanic basalts, 88M/2560
- —, augite, transformation to sodic pyroxene in eclogitized ferrogabbro, TEM study, 88M/0988; Atlantic, Gough Is., phenocrysts in alkaline basalt, chem. zoning, 88M/1378; Belgium, Liège province, Chaudfontaine, assoc. with baryte, 88M/3887; USA, Wyoming, Laramie, exsolved, from anorthosite complex, geothermometry of, 88M/0987
- —, bronzite, in Yamato (B) achondrite, crystallographic, chem. studies, 88M/0941
- —, clinopyroxene, and olivine, basaltic liquid, partitioning of Hf, Lu, Ti, Mn between, 88M/0456; CaMgSi₂O₆—CaAl₂SiO₆, synthesis, unit-cell parameters, 88M/5465; Fe—Mg—Ca, thermodynamic functions, 88M/5466; garnet—clinopyroxene Fe—Mg

geothermometer, reinterpn. of existing exptl. data, 88M/5455; in system metamorphic rocks, in reaction zone, CaScAlSiO₆-CaAl₂SiO₆, Raman spectroscopy study, 88M/5103; reaction —, orthopyroxene, aluminous, kinetics of

exptl. data, 88M/5455; CaScAlSiO6-CaAl2SiO6. spectroscopy study, 88M/5103; reaction garnet + clinopyroxene + quartz = 2 orthopyroxene + anorthite, potential geobarometer for granulites, 88M/5456; residual electron density at M2 site in C2/c, relationships with bulk chem., sub-solidus evolution, 88M/5101; synthetic, crystal structs., crystal-chem. relations, 88M/0250; two-phase, from lunar regolith, structl. features of, 88M/2559; Afghanistan, E. Logar, zoned phenocrysts in alkali lavas, petrogenesis, 88M/6186; Canada, Ontario, Munro Township, in komatiite, quantitative REE SIMS anals., 88M/5553; E. China, in mantle-derived inclusions in Cainozoic basalts, min. chem., geol. significance, 88M/4254; E. China, low P, in Cainozoic basalts, main characteristics, petrol. significance, 88M/4255; France, Massif Central, Albigeois, relict, in metabasites, 88M/1236; anal., Macedonia, Voras Mts., zoned, from volcanic rocks, 88M/6018; Hungary, Velence and Buda Mts., high-, low-P from alkali lamprophyres, cognate, 88M/4253; South Africa, Roberts Victor eclogites, O isotopes in coexisting garnets, clinopyroxenes, phlogopite, implications for petrogenesis, mantle metasomatism, 88M/0804; USA, California, Ward Creek metabasites, textural evolution, compositional variation in, 88M/2558; Hawaii, in xenolith, exsolved silicate, oxide phases from, implications for oxidation state of upper mantle, 88M/6205

—, diopside, chromian, and haplobasaltic liquid, partitioning of U, Pb, Cs, Yb, Hf, Re, Os between, 88M/0482; exptl. pseudomorphism by talc and serpentine in (Ni,Mg)Cl₂ aqueous solutions, 88M/3735; USSR, Polar Yakutia, genetic features of multicoloured crystals from skarns, 88M/4252

—, — –anorthite system, phys. props., melt structs. in, 88M/3651

—, enstatite, and lizardite, XRD, TEM, 88M/1804; neutron diffraction refinement of crystal struct., rigid-body anal. of thermal vibration, 88M/5098; polymorphism of, 88M/0553; *E. Africa*, large faceted, gemmological study, 88M/5508

-, fassaite, unusual occurrence in oceanic basalts, 88M/2560

—, hedenbergite, synthetic, heat capacity, 88M/2068

–, jade, Korea, Chuncheon, min., gemological characterization, 88M/0577

—, jadeite, superheating, melting, vitrification through decompression of high-P mins., 88M/3707; synthetic, General Electric, study, 88M/0578

—, kunzite, Finland, Haapaluoma pegmatite quarry, occurrence, chem. anal., 88M/2564; Sri Lanka, gem notes, 88M/5518

—, omphacite, order-disorder in, model for coupled substitution in point approximation, 88M/0251; statistical mechanical modelling of kinetics of order-disorder in, 88M/5102;

orthopyroxene, aluminous, kinetics of Fe²⁺-Mg distribn. in, 88M/5460; exptl. study of reaction biotite + 3 quartz = 3orthopyroxene + K-feldspar + water, 88M/5388; from alkaline basalt nodule, struct., evolution, 88M/2557; natural and aluminous, crystal-chem., heated 88M/5099; naturally, experimentally deformed, lattice defects in, TEM study, 88M/2065; O buffering by retrograde min. pair orthopyroxene-olivine in contact metamorphosed iron formations, 88M/1448: synthetic, and olivine, Ni-Mg partitioning between, application to geothermometry, 88M/5451; ternary Fe-Mg-Al solid solutions, thermodynamics, 88M/2066; thermobarometry in simple and complex systems, 88M/0554; thermochem. data, evaluation, 88M/1991; thermodynamics of MgSiO₃-Al₂O₃ heterovalent solid solutions, 88M/3727; Sri Lanka, Embilipitya area, occurrence, min. data, 88M/2556

SUBJECT INDEX

--, -- clinopyroxene pairs, *Norway*, *Rogaland*, geothermometry, 88M/4251

—, pigeonite, preferred orientation of antiphase boundaries in, as cooling ratemeter, 88M/5462

—, protopyroxene, high-*T* crystallogr., 88M/3462

---, spodumene, β-, crystallization in Li₂O-CaO-Al₂O₃-SiO₂ system, 88M/5468;
 Austria, Koralpe, Klementkogel, occurrence, chem. anal., 88M/2563

 — –garnet transformation in pyrolite model compn., exptl. study, bearing on constitution of mantle, 88M/0449

Pyroxenite, primary mantle-derived in, 88M/2808; Australia, W Victoria, isotopic geochem., 88M/3957; Canada, Quebec, Mt. Saint-Bruno, weathering of, geochem. evolution, 88M/0197

— veins, France, Ariège, Lherz and Freychinède ultramafic bodies, geochem., 88M/0706

 xenoliths, garnet, USA, Hawaii, Kaula Island, glass in, product of infiltration of host nephelinite, 88M/4533

Pyroxenoid, calorimetric study of high-P phase transitions among CdGeO₃ polymorphs, 88M/0551

Pyroxmangite, and rhodonite coexisting in system MnSiO₃-CaSiO₃-MgSiO₃-FeSiO₃, as geothermometer, 88M/2565; thermodynamic props., 88M/0555

Pyrrhotite, fabrics, discussion, 88M/1043; iron sulphides in metasediments, isotopic support for retrogressive pyrrhotite to pyrite reaction, 88M/3991; monoclinic, phase relations, 88M/2040; natural, detn. of O in, 88M/1045; O in, mechanistic model, 88M/1046; O in, thermomagnetic behaviour, annealing, 88M/1044

Quartz, + muscovite, metastable melting during breakdown of, at 1 kbar, 88M/1994; Al-O centres in, palaeodosimetric props., 88M/4768; anal. of quartz grain dimensions

in foliated greywackes, 88M/4696; and dolomite, H2O, exptl. equilibrium data for between, 88M/3700; and reactions montmorillonite, gouge mixtures frictional dependence on velocity, compn., fabric, 88M/4353; authigenic, in Devonian limestones, origin, significance, 88M/2969; CO₂-CH₄-H₂O fluid inclusions characterization by microthermometry, laser Raman microprobe, 88M/0610; decorating natural faces of mins, with anthraquinone, 88M/1510; dissolution into dilute alkaline solutions at 90°C, kinetic study, 88M/0493; dissolution kinetics as function of pH, time at 70°C, 88M/3742; druses, distinctive growth marks in, 88M/2598; exptl. study of reaction biotite + 3 quartz = 3 orthopyroxene + K-feldspar + water, 88M/5388; heat capacities from 340 to 1000 K, revised values for thermodynamic props., 88M/0570; hydrothermal, T effect on homogenization T of fluid, melt inclusions in, 88M/4439; increased solubility following ferrous-ferric iron reactions, 88M/3702; ionic conductivity, DC time dependence, transition in charge carriers. 88M/1516; mass-spectrometric detn. of gas compn. of mineralizing-fluid inclusions in, on heating under vacuum, 88M/2134; natural crystal, study of crystal growth by XRD topogr., 88M/2599; natural, synthetic fluid inclusions in, SEM/EDA anals., evaluation of method, 88M/5538; natural, systematics of electron and paramagnetic centres of, 88M/4766; naturally shocked, studies on lattice distortion, substructs. of shocked lamellae, 88M/0262; observations of striations on hydrothermally-grown prism facies of, 88M/2082; optical, polarization characteristics under thermal stress, 88M/4767; phengite geobarometry based on limiting assemblage with K-feldspar. phlogopite, quartz, 88M/0561; Rb, Sr, Nd, Sm concentrations in, 88M/2597; reaction muscovite + quartz
andalusite + K-feldspar + water, growth kinetics, mechanism, 88M/5393; scenic, gemstone, gem trade lab notes, 88M/5517; shocked, in Cretaceous-Tertiary boundary evidence for global distribn., 88M/0965; torsionally vibrating crystal, instrument for measuring viscosity of liquids up to 300 MPa, 400 K using, 88M/3716; wet, and wet berlinite, water precipitation, diffusion in, 88M/5395; Australia, Tasmania, and barren, Beaconsfield, auriferous electron spin resonance of, 88M/4177; Belgium, Ardennes, fluid inclusion study, 88M/3874; Bulgaria, Madan ore region, Erma-reka sector, gas-liquid inclusions in, 88M/0294; Chile, El Teniente and Rio Blanco porphyry Cu deposits, O, S isotopic compns., 88M/2142; Egypt, , grain surface textures, depositional interpns., 88M/2301; France, Ardennes, liquid-, gas-bearing inclusions in, optical, anal. studies, 88M/0611; India, Bihar, Singhbhum Cu belt, fluid inclusion studies, 88M/2167; Ireland, in red dust fall, November, 1979, SEM study, 88M/4637; Italy, Sardinia,

Masua mine, from karstic caves, fluid inclusion, stable isotope studies, 88M/0609; Mexico, Guadalcazar, decrepitometry of fluid inclusions in, from granite, principles, application to min. exploration, 88M/3523; Nicaragua, Momotombo geothermal field, hydrothermal crystals from four wells, petrogr. correlations, fluid inclusion anal., 88M/2133; USA, Texas, Llano County, Llano rhyolite, origin, significance of blue coloration in, 88M/6044; USSR, Anabar Shield, from polymetamorphic rocks, characteristics of inclusions, deformation, 88M/4739; Gt. Caucasus, from different age magmatic formations, metamorphic series, contents of rare and ore elems. in, 88M/2162; Polar Urals, compn. of water extracts from, 88M/6043; Transbaikalia, from Ta-bearing granites, typomorphism, Zaïre, unusual crystal, 88M/1012; 88M/2600

- —, α-, IR absorption spectra, P ≤ 40 kbar, 88M/3476; polarization effects in IR spectra, 88M/5123; struct. as function of T, P, 88M/5122
- —, agate, Hong Kong, min. watch cases, descrptn., 88M/0585
- —, amethyst, natural, impurity content, colouring of, 88M/4279; Brazil, classification, 88M/5500; India, Orissa, occurrence, 88M/4824
- —, amethyst-citrine combination: ametrine, no natural examples, 88M/5501
- —, chrysoprase v. chalcedony
- —, citrine, natural, thermal stability of yellow colour, colour centres in, 88M/3780
- crystals, hydrothermal growth at low fillings in NaCl, KCl solutions, 88M/2081; round embayments in, new interpn., 88M/2080; synthetic, sectorial, zonal struct., 88M/2084; W Alps, Alpine 'Root Zone', deformed, from porphyritic dykes, textures, c-axis orientations, 88M/4718; Denmark, Mors dome, microthermometry on solid inclusions in, 88M/5695; New Zealand, Haast schist belt, inversion T of, prelim. survey, 88M/6042
- ---, flint v. chalcedony
- -, onyx, in sword, descriptn., 88M/3771
- rocks, discriminatory petrofabric anal.
 using SEM electron channelling, 88M/1102
 rose-, crystal, synthesis, 88M/2083
- textures, Switzerland and Italy, Simplon fault zone, 88M/1160
- veins, crystal-bearing, effect of geol. struct. on formation of, 88M/5300; Australia, Tasmania, e.p.r. spectra, related to mineralization, 88M/5222; Canada, Nova Scotia, Au-bearing, mechanics of formation of, 88M/1177; Canada, Ontario, Wawa, auriferous, in Archaean trondhjemite, pattern, fluid alteration inclusions. 88M/0304; Canada, Slave Province. Yellowknife Bay, succession of, in Archaean metaturbidites, 88M/1180; South Africa, Witwatersrand quartzites, bedding-parallel shear vein formation, thrusting in, 88M/1168; Spain, Catalonian Coastal Poblet, scheelite-bearing, characterization of fluid inclusions, genetic model, 88M/2153; Switzerland and Italy,

Simplon fault zone, atypical textures in, 88M/4716; USSR, Middle Urals, Murzinskii shift's zone, recrystallization of, 88M/1488

- -- gold-stibnite vein system, New Zealand, Otago schist, near-surface hydrothermal activity, 88M/3599
- - gold-telluride veins, Fiji, Emperor mine, formation of, 88M/5285
- — water system, stable isotope geothermometry, 88M/2002
- --wolframite-sulphide veins, India, West Bengal, Chhendapathar, fluid inclusion geochem., 88M/0608
- Quartzite, dyed to resemble jade, gem trade notes, 88M/5519; naturally deformed, grain-boundary migration microstructs. in, 88M/4694; South Africa, Aggeneys, Bushmanland, heavy min. layers, evidence of clastic origin for genesis, 88M/1484; USA, Virginia, Willis Mt., trolleite and assoc. mins. in, 88M/6080
- Quaternary, geol. of prehistoric man, (book), 88M/0093

Radioactive ores, ¹⁴C content in, 88M/3882

- tracers, study of evolution of dredged material discharges by, 88M/5321
- waste, application of zeolite for treatment of, 88M/5330; chem., geochem. basis for immobilization of, in cements, 88M/3637; waste elems., movement through hydrothermally altered basalt, 88M/5311;
 disposal, bentonite in, review of research in support of Basalt Waste Isolation Project, 88M/3636; interaction of model glass with sea-water, deionized water, exptl. data, 88M/3639; Canada, role of isotope geochem. studies in nuclear fuel waste management programme, 88M/1965; Sweden; research programme on, isotope geochem. studies, 88M/1967
- Radioactivity, natural, *India, Kerala, Trivandrum dist.*, distribn. studies,
 88M/1548
- Radioisotopes, long-lived, accelerator mass spectrometry for measurement of, 88M/0087
- Radionuclides, distribn. coefficients and groundwaters, between soils dependence on various test parameters, 88M/5313; fallout, time-dependent modelling of transport in drainage basin. 88M/1964; in marine coastal sediments, of diffusion coefficients, 88M/5324; long lived, measurement by non-radiometric methods, 88M/4956; NW Atlantic Ocean, natural and anthropogenic, distribus., 88M/1951; England, Cumbria, levels in soils, 88M/5316; Ribble estuary. gamma emitting, detn. in muds, silts, 88M/5317; Wirral and Lancashire, in coastal, estuarine sediments, 88M/5318; Switzerland, transport of, in alpine watershed, 88M/1958; USA, California, Salton Sea geothermal field, U-Th series, in brines and reservoir rocks from boreholes, 88M/1983; Washington, (Pu, ²⁴¹Am, ¹³⁷Cs), natural (U,Th, ²¹⁰Pb), cycling in continental slope sediments, 88M/0405

- Radium, use of track detectors for evaluation of emanating Ra content of soils, 88M/1674; Australia, source of Ra in anomalous accumulations near sandstone escarpments, 88M/4176; USA, Texas Gulf, in water supplies from coastal aquifer, 88M/3624
- isotopes, ²²⁴Ra, in natural waters, new method for rapid measurement of, 88M/4182; ²²⁸Ra, ²²⁶Ra, sequential anal, method for detn. in envtl. samples, 88M/4955
- Radon, dependence of 222Rn flux on concentrations of soil and air gas, anal. of effects produced by several atmospheric variables, 88M/4003; detn. of migration times in aquifer-borehole systems from decay-product accumulation, 88M/2367; New Zealand, test of Rn ground measurements as geothermal prospecting tool, 88M/5932; Réunion, Piton de la volcano, measurements, Fournaise. 1983-1987, 88M/6244; USA, Colorado, Denver, envtl. influences on concns. in soil gases, 88M/4180; Texas Gulf, in water supplies from coastal aquifer, 88M/3624

Ramsbeckite, revision of chem. formula based on struct. detn., 88M/3504; USA, Pennsylvania, Ecton mine, occurrence, 88M/2637

Ramsdellite, crystallochem. systematics, 88M/0270

Rankinite, vibrational interactions of tetrahedra in, 88M/5078

- RED SEA, magmatic history of rifting, 88M/1387; N., struct., evolution of, 88M/4848; Atlantic II Deep, metal remobilization at spreading centre, Pb isotope study, 88M/5587; fish debris in hydrothermal sediments, record of activity, 88M/4027; mineralogy of hydrothermal sequence in core, 88M/3410; Jeddah, modern hypersaline lagoon sediments, chem., 88M/4031
- Reference samples, clay, mineralogy, instrumental NAA, 88M/4184
- Refractive indices, fundamental equation of birefringence for exact calculation of 88M/3127; measurement of, procedures computer programs to refine double variation method, 88M/1668
- Regolith, Australia, O isotope dating 88M/3239
- Reichenbachite, Germany, Reichenbach, new Cu phosphate min., 88M/1091
- Remote sensing, N. Chile, Landsat TM. imagery, identification, spectra characteristics of hydrothermal alteration 88M/5242; Norway, Trøndelag, Landsat TM-data used in mapping of large-scale geol. structs. in coastal areas, 88M/4375; W Wales, Landsat images, lineaments in 88M/1149
- Renierite, As-bearing, Japan, Akita pref. Furutobe mine, occurrence, anals. 88M/4321
- Retgersite, α-nickel sulphate hexahydrate struct, absolute configuration, optica activity, 88M/1831
- Reyerite, crystal struct., 88M/3459

Rhabdophane, dehydration kinetics, 88M/2056; synthetic, end-member analogues of, surface reactions of, and evolution of natural waters, 88M/5444

Rhenium, comparative marine chem., 88M/0590

Rheology, of polymineralic rocks, 88M/6466
Rhodium, behaviour during Cu sulphide crystallization under hydrothermal condns., 88M/5427; USSR, Turkmen SSR, Sumbar-SM-4 section, distribn. at Cretaceous/Tertiary boundary analysed by ultrasensitive laser photoionization, 88M/5709

Rhodochrosite, solid-solution thermodynamics in CaCO₃–MnCO₃, 88M/0538; Angola, mouth of Congo, elem. migration, min. genesis, 88M/2305; Australia, Victoria, Clunes Goldfield, occurrence, 88M/6074; Scotland, Argyllshire, Islay and Invernessshire, Dalroy, occurrence, 88M/1068; USA, Colorado, Grizzly Bear mine, occurrence, 88M/4835

—, kutnahorite, [CaMn(CO₃)₂], cation order–disorder, petrol., crystal chem. implications, 88M/0279

Rhodonite, and pyroxmangite coexisting in system MnSiO₃—CaSiO₃—MgSiO₃—FeSiO₃, as geothermometer, 88M/2565

-, fowlerite, thermodynamic props., 88M/0555

Rhyodacite, *Poland*, *Cracow*, *Zalas*, adularization of plagioclases in, 88M/3023

Rhyolite, high silica, partition coefficients for REE in mafic mins. of, importance of accessory min. inclusions, 88M/3872; Canada, New Brunswick, uraniferous, Devonian-Carboniferous, geochem., 88M/5665; Ontario, Thessalon region, geol., geochem., 88M/2270; Italy, Aeolian Is., Lipari, contaminated with metapelite, gabbro, origin, 88M/6174; Portugal, Macedo de Cavaleiros region, peralkaline, Palaeozoic, petrogenesis, 88M/4453; USA, Alaska, Katmai National Park, Valley of Ten Thousand Smokes, 1912 eruption, petrol., 88M/4595; Texas, Hudspeth County, Sierra Blanca Peaks, cryolite-bearing, rare metal-enriched, 88M/3970; Llano County, Llano, origin, significance of blue coloration in quartz from, 88M/6044; Snowdon volcanic - centre, emplacement of geochem. distinct groups of, 88M/2894

Rhyolitic lava domes, Japan, Niijima Is., two-stage mixing in magmatic inclusions and, 88M/1324

Richelsdorfite, new min., crystal struct., 88M/5155

Riebeckite v. amphibole

Rietveld analysis, constant wavelength, data collection strategies for, 88M/3270

Rift structures, geophys. studies and dynamics, 88M/6499

Ring complexes, Egypt, Southeastern Desert, relation to mineralization, 88M/2843; Japan, Shitara dist., subvolcanic struct. of central dyke swarm assoc. with, 88M/6196

—, alkaline, Egypt, Eastern Desert, Silurian to Cretaceous, cooling history, fission-track dating, 88M/0020; Nigeria,

example of Phanerozoic anorogenic mid-plate magmatism, 88M/2798; USA, White Mountains, Q.A.P.F. modal trends, comparisons with other complexes of world, 88M/4514; Zaïre, Kivu, Biega, min., petrol., geodynamic significance, 88M/4494

Robertsite, *Thailand*, in sedimentary phosphate ore, 88M/6079

Rock studies, application of tomodensitometry to, new anal, method, 88M/3266

Rock weathering, in situ, used in civil engineering, review, 88M/3613

Rocks, technical note on polishing of, 88M/3265

Rodingite, Poland, Lower Silesia, Braszowice– Brzeźnica massif, Mikołajów, from serpentinite, 88M/4722

Roggianite v. zeolite

ROMANIA, Baia-Mare dist., curved jamesonite crystals, occurrence, growth models, 88M/3124; Dobruja, aquifers assoc. with calcareous deposites, isotopic anals., 88M/5872; Iara-Huedin-Hodişu region, sedimentary rocks, min., petrogr. features, 88M/6331; Transylvanian Basin, Eocene iron ore, characteristics, 88M/5198

Römerite, Germany, Grube Clara, occurrence, 88M/4813

Rostite, *Italy, Tuscany, Cetine mine*, occurrence in oxidation zone, 88M/1059

Roxbyite, South Australia, Roxby Downs, new Cu sulphide min., 88M/6096

Rozenite, Czechoslovakia, Niná Myšľa, occurrence, anals., 88M/1056; England, Cumbrian coalfield, occurrence, 88M/6469

Rubidium isotopes, Rb/Sr dating v. age determination

Ruby v. corundum

Rutheniridosmine, new type of Primineralization, 88M/0285

Ruthenium, phys. props. of Os, Ir, Ru, Pt cubic solid solutions, 88M/4770

Rutile, anisotropic phase transition under shock compression, 88M/5412; charge density, 88M/1818; min. inclusions of cacoxenite found to be, 88M/5512; saturation in magmas, implications for Ti-Nb-Ta depletion in island-arc basalts, 88M/3649; Botswana, Orapa kimberlite, Nb-Cr-, occurrence, 88M/1024; Germany, new min. occurrences, 88M/6475; Greece, Xanthi, Rhodope crystalline complex, in amphibolitized eclogites, 88M/4725; India, Orissa, Koira valley, Dengura Mn ore bodies, morpho-chem., 88M/6050; Italy, Sardinia, Olmedo, in bauxite deposits, 88M/1937; Norwegian Sea, diagenesis of titaniferous mins. in Jurassic sandstones, 88M/6313; Poland, in clay rocks, 88M/0175

— crystals, USSR, Urals, channels in, 88M/1023

Sadanagaite v. amphibole ST LUCIA, geochem. survey, 88M/089 Sakuraite, crystal struct., 88M/1824

Saleeite, crystal struct., 88M/5162; Brazil,
Minas Gerais, Urucum pegmatite,
occurrence, 88M/2618

Saline basins, anoxic, E. Mediterranean, gelatinous pellicles in, 88M/1419

Salt, natural rock, texture investigations using neutron diffraction, 88M/1405; *Japan*, *Asama volcano region*, accumulation at cliff base, 88M/3845

— deposits v. evaporites

— diapirs, salt dome cap rocks, USA, Gulf Coast, multiple fluid components of, 88M/5786

Samarium, spectral interferences in INAA, 88M/0924

isotopes, Sm/Nd dating v. age determination

Sand, calcareous aquifer, processes, kinetics of Cd²⁺ sorption by, 88M/0506; oxidizing clayey, Np migration in, 88M/1959; *India, Kerala, Fort Cochin* to *Chellanam*, beach, textural, min. studies, 88M/4657; *USA, Appalachians*, fluvial, Holocene, opaque mins. in, 88M/6348

— resources, *Japan*, seabed sand mining, 88M/3608

Sand and gravel resources, marine mining, processing technologies, 88M/5298; *United Kingdom*, marine dredging industry, 88M/5297

Sandstone, determining representative compn. of set of samples, 88M/6309; diagenetic chloritization of feldspars in, 88M/1409; diagenetic 'replacement' of feldspars by Ti oxides in, 88M/1410; porous quartz, new mechanism for P solution in, 88M/2009; quartzose, petrogr. constraints on models of intergranular P solution in, 88M/5785; U series disequilibria as means to study transport mechanism of U in samples during weathering, 88M/2300; Antarctica, Victoria Land, Beacon Supergroup, steranes, triterpanes in, 88M/2438; Australia, source of Ra in anomalous accumulations near escarpments, 88M/4176; South Australia, Beverley deposit, Tertiary, accretionary migration of U in, TL evidence, 88M/2322; Austria, Salzburg, glauconite in, condns. of formation of, 88M/2586; Bangladesh, Bengal basin, Surma group, reservoir, implication of shale diagenesis on cementation of, 88M/4659; Canada, Nova Scotia, Cape Breton Is., lithol. in Silver Mine fm., relation to galena occurrence in Yava deposit, 88M/1867; Goldenville fm., and slate, metamorphosed interbedded, sedimentology, 88M/2997; Denmark, Bunter Sandstone fm., Triassic, diagenesis, 88M/2959; England, Cornwall, Gramscatho basin, turbiditic, Devonian, tectonic envt., framework mode, geochem. evidence, 88M/2299; France, Vosges, Vittel, Lower Triassic, geothermal, hydrochem. anomaly, 88M/2347; Gulf of Mexico sedimentary basin, Cainozoic, diagenetic evolution of, 88M/1443: Ireland. County Mayo. Maumtrasna fm., Ordovician, nature, field relations, 88M/4636; Italy, Vetto-Carpineti diagenetic evolution syncline, stratigraphic series, 88M/1760; Japan, Shikoku dist., Palaeozoic-Cainozoic, chem. variation, 88M/2318; New Zealand, Wairarapa, Te Kaukau Point, in situ and intrusive, in limestone, 88M/4665; North Sea, reservoir, detrital garnets provenance, correlation indicators

88M/6316; Norway, feldspathic, Proterozoic stratigr., 88M/4372; Norwegian Sea, Jurassic, diagenesis of titaniferous mins. in, 88M/6313; Oman, Southern Region, Murbat fm., evidence of Permo-Carboniferous glaciation in, 88M/4653; Pacific Ocean, Diato Ridge, isotopic aspects of thermal, burial diagenesis of, 88M/0780; Poland, Fore-Sudetic Cu deposit, mineralization, 88M/3585; Spain, Tremp-Graus Basin, Roda Sandstone, Eocene, shallow-marine, early diagenetic alteration, 88M/6326; Sweden, Proterozoic, detrital feldspar in, SEM study of dissolution textures, 88M/6040; Tanzania, Pugu coastal area, Miocene kaolinitic, fluvio-deltaic envt., in pedogenesis, 88M/1421; USA, Mississippi and Alabama, Norphlet fm., æolian and fluvial feldspathic, diagenesis of, 88M/4669; New Mexico, White Sands, æolian dune, interdune-sands, early diagenesis, 88M/6354; Rocky Mts. area, Weber and Tensleep fm., pore-waters, origin, evolution, 88M/3988; Texas Gulf Coast, Frio fm., regional variations in formation water chem., 88M/4116; Wilcox, Eocene, diagenetic history, comment, 88M/4673; Wyoming, Albany County, Plumbago Creek, silica resources of, 88M/5309; Zaïre, Shaba, Biano, petrogr. study of silicious cement, originally calcite, dolomite, 88M/4654

- diagenesis, oilfield waters and, 88M/5793
- -- mudstone suites, provenance signatures, discriminant function anal. of major-elem. data, 88M/5725
- -volcanic sequence, central Australia, Davenport province, Proterozoic, fault reactivation, superimposed folding in, 88M/1174

Sanidine v. feldspar Saponite v. clay minerals Sapphire v. corundum

Sapphirine, and spinel phase relationships in system FeO-MgO-Al₂O₃-SiO₂-TiO₂-O₂ in presence of quartz, hypersthene, 88M/5386; blue, pleochroic, descriptn., 88M/2107; brown-green, descriptn., 88M/2108; Brazil, Bahia, Caraiba complex, influence of Fe²⁺-Fe³⁺ distribn. on stability in natural assemblages, 88M/3120; USA, New York, Johnsburg, Adirondack Mts., occurrence, 88M/4832

Sapropel, Black Sea, Holocene, stable C isotopic evidence for marine origin of organic matter in, 88M/5906; Mediterranean Sea, Quaternary, organic geochem., palynology, 88M/5903

Sarcolite, extra-framework atoms in crystal struct., 88M/3490

SAUDI ARABIA, geochem. exploration in arid envts., problem of æolian contamination, 88M/2467; Precambrian ophiolites, geol. settings, U/Pb dating, Pb-isotope characteristics, implications for continental accretion, 88M/4896; central, Jurassic sedimentary rocks, sedimentary history, palaeogeog., 88M/1424; Arabian Shield, Al'Awshaziyah quadrangle, late Proterozoic volcanic, mafic plutonic rocks, geochem. reconnaissance, 88M/1169; Wadi

Shuqub quadrangle, plutonic rocks, Rb/Sr geochronol., geochem., 88M/1626; N. Arabian shield, Oufar quadrangle, Al' Awshaziyah quadrangle, late Proterozoic volcanic and mafic plutonic rocks, geochem. reconnaissance, 88M/0721; coastal plain, Red Sea, magmatic histroy of rifting, 88M/1387; W. coast, early mixed-water dolomitization in Pleistocene reef limestone, 88M/2986

SCANDINAVIA, regional aeromagnetic, gravity studies, 88M/2686; xenoliths. occurrence, 88M/2739; Fennoscandian Shield, mafic dykes, palaeomagnetism, 88M/6457; Nasafjäll Window, Caledonides, metamorphism in basement implications for tectonic evolution, 88M/4701; Seve nappes, Caledonides, isotopic evidence for Precambrian provenance, Caledonian metamorphism of paragneisses, U/Pb zircon, Sm-Nd whole rock data, 88M/4876, ion microprobe zircon U-Th-Pb data, 88M/4877

Scapolite, discovery in Bishunpur chondritic meteorite, 88M/0936; S-bearing, hydrothermal stability of, 88M/2087; solid solutions, HRTEM characterization, 88M/6045; sulphate-, hydrothermal 88M/2086; synthesis, Australia, Queensland, McBride Province, origin in ultramafic, mafic xenoliths, 88M/1282; Canada, Quebec, Gatineau, from skarn, chem. compn., 88M/6075

Scheelite, and wolframite, syngenetic, metamorphic redistribn, into veins, pegmatoids, geochem., 88M/5944; fluidinclusion data on physicochem. parameters for formation in various types of deposit, 88M/4310; from various deposits, tr. components in, 88M/5567; in hydrothermal solutions, formation condns. of, 88M/0486; N. American Cordillera, behaviour in stream, 88M/2495; SW Greenland. Archaean stratabound, in Malene supracrustal rocks, 88M/6105; Italy Sicily, Peloritani Mts., chem., min. data for, 88M/4309; Spain, Catalonian Coastal Range, Poblet, -bearing quartz veins, characterization of fluid inclusions, genetic model, 88M/2153; Sweden, Sandudden W deposit, in skarn-limestone 88M/3569

- deposits, assocn. of tourmalinite with, 88M/3520; Alps, Eastern, Felbertal, S isotope studies, 88M/3892; China, W. Hunan., stratabound, geol., mineralization, 88M/5205

- mineralization, Bulgaria, Plana pluton, in metasomatites, 88M/0615

Schist, black, tellurides of Au, Ag from, 88M/4317; graphite in, XRD detn., 88M/4926; E Alps, Tauern Window, interlayered graphitic and nongraphitic, fluid heterogeneities, hornblende stability in, 88M/1472; Czechoslovakia, Malé Karpaty Mts. metamorphic zones, alkali and alkaline earth metals in, 88M/2353; Mlynský Brook section, Malá Fatra Mts. crystalline schists, P-T condns. of metamorphism, 88M/3092; Finland, Savonranta, cordieritebearing layered, metamorphic development,

Deux-Sèvres, 88M/3046; France, amphibole-, marine and chloritized supergene alteration processes, 88M/0164; India, Karnataka, Attikatti-Mahalingpur area, occurrence of pillow structs. in, 88M/3096; West Bengal, Shusina hill, sodic, petrog., 88M/2695; Japan, Shikoku, Sebadani metagabbro mass, Sambagawa schist, resorption-overgrowth of garnet, in contact aureole, 88M/3103; New Zealand, Alpine, shallow-level metamorphic fluids in high uplift rate metamorphic belt, 88M/4067; E. Otago, weathered, soils from, formation, chem., mineralogy, 88M/5049; Nigeria, Lokoja, in metasedimentary belts, Rb/Sr dating, implications for Precambrian evolution, 88M/3221; Tanzania, Mpwapwa Mautia Hill, talc-kyaniteyoderite-quartz, and assoc. rocks, petrol., 88M/1482; USA, California, Catalina schist, metasomatism, partial melting in subduction complex, 88M/1402: Massachusetts, New Salem area, sillimanite-staurolite, systematic retrograde metamorphism, 88M/1502; USSR, N. Caucasus, petrochem., geol., 88M/1489

mica, distinction of regionally metamorphosed greisens from, 88M/4721; Finland, Puolankajärvi fm., amphibolite facies, staurolite-bearing, metamorphic behaviour, petrogenetic significance of Zn in, 88M/0797; Savonranta, metamorphic development, 88M/3046; France, Massif Central, Échassières drill-hole, geochem. behaviour, 88M/3935; Rouergue crystalline region, metamorphic series derived through ductile shear deformation of granite, 88M/6391; Maures Massif, tectonic origin, 88M/4709

-, pelitic, amphibolite facies, local, regional differences in chem. potential of water in, 88M/6424; Japan, Sanbagawa, ³⁹Ar/⁴⁰Ar dating, Mesozoic high-P metamorphism, 88M/1633; REE-bearing epidote from, Norway, Seiland, blasto-88M/2128: mylonitic, variations in garnet, plagioclase compn. with declining metamorphic grade, 88M/2545

xenolith, Germany, East Eifel, Wehr volcano, compn., melting relationships of andalusite in, 88M/4245

Scolecite v. zeolite

Scoria, USA, Wyoming, report, 88M/1947 Scorodite, FeAsO₄.2H₂O₂, solubility, stability,

discussion, 88M/2012, reply, 88M/2013, discussion, 88M/2014, reply, 88M/2015

SCOTLAND, geothermal 88M/3145; kyanite in mainland Lewisian complex, 88M/1468; soils, design of database for, 88M/0200; N, late Palaeozoic alkali lamprophyre dykes, petrochem., 88M/2822; NE, ironstone-gossan discrimination, geochem. approach, 88M/4168; SW, Lugar Sill, petrol., 88M/2829; NW, granulite facies Nd-isotopic homogenization in Lewisian complex, 88M/3203; NW, syn-orogenic alkaline magmatism, relationship to thermal state of lithosphere, 88M/4879; Argyll, Lagalochan intrusive complex, application of topof-bedrock geochem. sampling techniques, 88M/5924, geol., mineralization, 88M/5190; Assynt, Stack of Glencoul, Moine thrust zone, heterogeneous deformation, quartz crystallographic fabric transitions, 88M/4702; Firth of Forth, influence of inputs to, on tr. metal concn. in coastal waters, 88M/1955; Grampian group, Proterozoic, depositional envts., 88M/4367; Grampians, Newer Granites, age, origin, 88M/3205; Inner Hebrides, early diagenetic dolostones from low-salinity-Jurassic lagoon, geochem., 88M/5696; Glas Eilean lavas, evidence of Lower Permian volcano-tectonic basin between Islay and Jura, 88M/2891; Gt. Estuarine group, Jurassic clay min. assemblages, postdepositional alteration, 88M/0163; Midland Valley, acidic volcanic clasts in Silurian conglomerates, geochem., implications for Caledonian orogeny, 88M/4377; Perthshire, Corrycharmaig serpentinite, Dalradian ultramafic intrusion, 88M/2825; Sleat and Torridon groups, Proterozoic stratigr., 88M/4363; Southern Uplands, accretionary prism, importance of analogues in reconstructing palaeogeog., 88M/2960; epithermal base metal vein mineralization, nature, origin of fluids, 88M/3525; Ordovician back-arc basin, 88M/2961; Cairnsmore intrusion, role of hybridization, crystal fractionation in evolution, 88M/2828; N, central belts of Southern Uplands, provenance of granite boulders in conglomerates, 88M/4881; S belt of Southern Uplands accretionary complex, tectonic development, 88M/2687; Tyndrum, Au-Ag vein mineralization, min. data, 88M/5581; Ullapool-Strath Kanaird region, thrust and normal faults, implications for NW Highland tectonics, 88M/6108; Upper Morar, psammitic formation, sedimentary structs., sequences within late Proterozoic tidal shelf deposit, 88M/4356

—, DUMFRIES AND GALLOWAY, Criffel, granodiorite/granite zoned pluton, oblique diapirism, 88M/1233; Luce Bay, Big Scare, mica lamprophyre dykes, petrol., 88M/6107; Newton Stewart, Talnotry, Ni-Cu mineralization, 88M/3571

—, FIFE, emplacement of alkali dolerite sills relative to volcanism and sedimentary basins in Carboniferous, 88M/2826; and West Lothian, Lower Oil-Shale group, Dinantian non-marine dolostone, lithofacies, stratigr., 88M/1412; Cardenden, high-level emplacement of olivine-dolerite sill into Namurian sediments, 88M/2827

isotopic, structl. age of, 88M/4880; Colonsay group, Proterozoic stratigr., 88M/4365; Colonsay Limestone, value of chemostratigraphical correlation in metamorphic terrains, 88M/0798; N Deeside, Glen Gairn area, relationships between 'Younger' and 'Older Basics', 88M/6109; Etive, granitic complex, geochem., petrol. characteristics, 88M/4467; Loch Etive, geochem. assocns., post-depositional mobility of heavy metals in coastal sediments, 88M/2297; Inschintrusion, middle zone cumulates and assoc.

gabbroic focks, silicate mineralogy, 88M/6153; Islay and Inverness-shire, Dalroy, rhodochrosite. occurrence 88M/1068; Kilmelford, Caledonides. shoshonite, occurrence, tectonic implications, 88M/0700; Cu-bearing suite, geol., 88M/3570; lithogeochem. exploration for Cu, Au, 88M/4169; Lossiemouth, phosgenite, first Scottish occurrence, 88M/6467

-, HIGHLAND, Ardgour, Lismore, parallel Caledonian, Permo-Carboniferous lamprophyre dyke swarms, regional, tectonic implications, 88M/2823; Ballachulish thermal aureole, variations in Mg/(Mg + Fe), F, (Fe,Mg)Si = 2A1 in, 88M/1001; Central Highland division, Proterozoic granulites, stratigr., 88M/4358; Gairloch, Kerry Road orebody, geophys. study, 88M/4786; Gruinard Bay, gneiss Gruinard Bayes, REE geochem., 88M/0799; Loch Maree group, Proterozoic stratiform sulphide deposits, 88M/1874; Glenelg, plagioclase breakdown, regeneration reactions in Grenville kyanite eclogite, 88M/6385; Glenfinnan and Loch Eil divisions of Moine assemblage, Proterozoic metasediments, stratigr., 88M/4357; Moine assemblage. Proterozoic. stratigr... 88M/4359; Moine Thrust Zone, relationship between K/Ar min. ages, mica grain-sizes, movement, 88M/3204; inner Moray Firth, Triassic sedimentary rocks, early rift deposits, 88M/4629; Ross of Mull, Caledonian dyke-swarms, spatial, temporal intimacy between lamprophyric, granitic magmatism around pluton, 88M/4466; Rhum, basaltic replenishment of magma chamber, evidence from unit 14, 88M/2824; palaeomagnetism of Torridonian, evidence for limited uplift of central intrusive complex, 88M/4785; Rhum layered complex, layering of, 88M/1193; origin of finger structs., phase equilibrium, heat effects, 88M/1232; Scourian complex, magmatic evolution, 88M/3050; Scourian complex, causes of high-grade metamorphism, 88M/3051; geochem., petrogenesis, tectonic models, 88M/3049; Inverian retrogression, crystallization of melts, pegmatite intrusion, 88M/4703; Scourian dykes, mineralogy, petrol., geochem., petrogenesis, crystallization processes in dykes intruded at depth, 88M/3053; Skye, Ce/Nd isotope study of crustal contamination processes affecting Palaeocene magma, 88M/0699; Stoer, Scourian complex, supracrustal rocks, orthogneisses, petrol., implications for geol. evolution of Lewisian complex, 88M/3052; Stoer group, Proterozoic, stratigr., 88M/4362; Sutherland and Caithness, Scaraben area, metamorphic rocks, lithol., 88M/6384; central and SE Sutherland, basement-cover relationships and struct. within Moine rocks, 88M/4704

—, SHETLAND, N. of, offshore continuation of Moine Thrust deduced from basement isotope ages, 88M/1137; NNE of, new Tertiary sill complex, prelim. report, 88M/2935; Moine rocks, Proterozoic, stratigr., 88M/4360; Shetland ophiolite complex, irarsite-hollingworthite solid-solution series, occurrence, 88M/2633

-, STRATHCLYDE, Ayrshire, Ailsa Craig, arfvedsonite-aegirine microgranite, geol., petrol., geochem., 88M/4468; Ballantrae complex, xenolith suite in serpentinite, 88M/6155; Ballantrae complex, Balcreuchan Port borehole, geochem. assocns. of lava sequence, 88M/5626; Ballantrae and Loch Ryan, Permian lithol., 88M/6318; successions, Renfrewshire, Gourock, birnessite, occurrence, 88M/6468

—, WESTERN ISLES, Outer Hebrides, Benbecula, Garry-a-siar, metasomatic phenomena adjacent to granite pegmatite, 88M/1449

Scuba diving, sampling of estuarine waters, 88M/3283

Sea-level, and magnetic reversal rate, phase difference between, 88M/3173

Sediment analysis, grain size, shape, orientation in sands, sandstones, computer-based image anal. system, 88M/0055; use of concrete mixers to wash sediment prior to sieving, 88M/0050

 gravity flows, subaqueous, field evidence for hydraulic jumps in, 88M/6353

 transport, ¹⁰Be as tracer of erosion and, 88M/3983; in tide zone, measurement using nuclear gauge, 88M/6311

Sedimentary basins, deep, noble gases in formation fluids from, review, 88M/5794; high sedimentation-rate, early diagenetic mineralization reactions in, 88M/0756; high sedimentation-rate offshore, sub-surface fluids, early diagenetic pore-water evolution in, 88M/0813; simple analytical method for calculating T perturbations in, caused by flow of water through thin aquifers, 88M/5797; supercomputer anal., 88M/4675; Australia, Pilbara Block, Whim Creek Belt, Archaean ensialic fault-bounded basin, structl. evolution, 88M/4405; India, Karnataka, Kaladgi-Badami Basin, geol., 88M/4389; Madhya Pradesh, Bastar Dist., Abujhmar Basin, geol. history, 88M/4388; Andhra Pradesh, Madhya Pradesh, Godavari valley, Albaka belt, depositional envt., 88M/4392; Bhima group, Upper Proterozoic, stratigraphic 88M/4390; Chhattisgarh Basin, stratigr., sedimentation, 88M/4391; Pakhal Basin, review, 88M/4387; Central India, Indravati Proterozoic, late sedimentary envt., evolution, 88M/4386; Peninsular India, Cuddapah basin, stratigr., struct., evolution, 88M/4384; Kenya, Gregory Rift, Lakes Baringo, Bogoria, hydrol., sedimentary history, 88M/4381

— environments, sources, occurrences of C₁₂-C₂₂ n-alkane distribus. with even C-number preference in, 88M/0842; USA, Basin, Illinois, Glen Dean fm., carbonate platforms, tidal, deltaic controls on, 88M/4671

— rocks, ancient, anal. for total organic C, 88M/0080; from artesian basin, study of pore solutions during stepwise compression, 88M/4036; methylbiphenyl, ethylbiphenyl, dimethylbiphenyl isomer distribus. in, 88M/4147; peculiarities of formation of silicate assocns. on continents, oceanic pelagic zones, 88M/4628; separation, recovery of S species in, for stable S isotopic detn., 88M/5738; Antarctica, geochem., Strait, lipid Bransfield 88M/2439; Ellsworth-Thiel mountains ridge, petrol., 88M/2994; Australia, Georgina Basin, Cambrian, pyrite, organic matter in, 88M/4040; Belgium, Brabant, Dyle and Thyle valleys, Cambrian-Ordovician sequence, lithol., 88M/4639; NE Bulgaria, Mesozoic, mineralogy, genesis of clayey component in, 88M/1764; Canada, British Columbia, Carbon Creek coal basin, Gething fm., Lower Cretaceous, stratigr., sedimentol., 88M/3003; Queen Charlotte Is., Jurassic stratigr., 88M/3005; Quebec, Chapais, Opemisca group, Archaean, terrestrial-shallow marine transition, 88M/2998; Saskatchewan, Claggett, marine cyclothem, palaeoenvtl. geochem., 88M/0784; Yukon Territory and North West Territories, Devonian outcrop belts, stratigr., 88M/3002; China, Dongpu basin, organic geochem. anal. of envts., 88M/0852; England, W. Cornwall, Oligocene, Miocene outliers, bearing on geomorphol. evolution, 88M/2966; Isle of Man, Castletown area, Carboniferous, stratigr., 88M/4635; Germany, carbonaceous fan sequences, Permian, petrogr., inorganic, organic geochem., constraints to palaeogeog., assessment of source rock potential, 88M/5919; Baden-Baden, syncline, Rotliegendes, sedimentol. cycles, min. criteria for characterization, 88M/6330; Guinea, Gaoual region, Palaeozoic, weathering, 88M/1755; NW Guinea, Palaeozoic, granulometric study, 88M/2988; sedimentol. study, 88M/2987; India, Maharashtra, Ghugus coalfield, Lower Gondwana sediments, heavy mins., 88M/1425; Orissa, Kalahandi Koraput dists., Ampani outlier, geol., 88M/4393; Vindhyan supergroup, review, 88M/4385; Peninsular India, Purāna basins, Archaean-early Proterozoic transition, 88M/4382; Ireland, Leinster coalfield, stratigr. of Namurian rocks, 88M/2968; Mexico, Poza Rica trend, Cretaceous, evolution of pore space, Norway, 88M/6355; Framvaren, partitioning, enrichment of tr. metals in sediment core, 88M/5692; Baranów, stoneware loams, lithol., raw material props., 88M/1770; Romania, Iara-Huedin-Hodişu region, min., petrogr. features, 88M/6331; central Saudi Arabia, Jurassic, sedimentary history, palaeogeog., 88M/1424; Scotland, Ballantrae and Loch Ryan, Permian, lithol., 88M/6318; Grampian group, Proterozoic, depositional envts., 88M/4367; inner Moray Firth, Triassic early rift deposits, 88M/4629; Spain, Cuenco del Duero, transitional marsh to lacustrine envt., Micocene, min., geochem., palaeontol. study, 88M/6327; USA, Kentucky, Breathitt fm., marine horizons, depositional anal., tr. elems.,

stable isotopes, 88M/0790; Virginia, Briery Creek Triassic basin, geol., 88M/6349; USSR, Caucasus geosyncline, early to Middle Lias basin, rare, dispersed elems. in, 88M/2309; Siberian Platform, Malaya Botuoba area, Lower Palaeozoic, mineralogy, 88M/4661; W Siberia, Palaeozoic, Ce, Eu, Sc in, 88M/5713; S-central Wales, geol. succession, struct., 88M/1152

-, carbonate, deep-water, geochem. evaluation of diagenetic processes in, 88M/5741; detection of organic matter in thin-sections of, using white card, 88M/3257; hydrothermal alteration by Na-F solutions under flow condns., exptl. study, 88M/2026; role in genesis of bauxite, 88M/1418; significance of ooids in petroleum source-rock studies, 88M/1407; stylolitic porosity in, critical factor for deep hydrocarbon production, 88M/1404; Bahamas, San Salvador, Upper Cainozoic, use of Sr isotopes to constrain timing, mode of dolomitization. 88M/0795; Atlantic Ocean, Rio Grande Rise, geochem., redox evolution, 88M/4007; Canada, Alberta, of Devonian reef, ³⁴S/³²S variations in tr. sulphide, sulphate in, 88M/3996; Newfoundland, St. George group, Lower Ordovician, stratigr., interaction between eustasy, tectonics, 88M/4667; China, Xisha Archipelago, Yongxing Is., Tertiary reef rock, 88M/1428; England, Bowland Basin, carbonate-clastic sequence, burial dolomitization, porosity development, 88M/2963; Hungary, Austria, Upper Triassic peritidal sequences, comparative statistical anal., 88M/2981; India, Andhra Pradesh, Cuddapah, Vempalle fm., Proterozoic, chrysotile asbestos mineralization along stylolites in, 88M/4396; Karnataka, Kaladgi, Badami and Bhima groups, Proterozoic, stable isotope geochem., 88M/2313; Poland, Upper Silesian coal basin, Devonian, early diagenetic cement in, 88M/2980; NE Spitsbergen, contrasting late Precambrian, petrol., isotopic implications, 88M/4008; USA, Appalachians, Cambrian, evidence for Late Palaeozoic brine migration in, 88M/0607; New York, Cherry Valley, Devonian, burial history, 88M/4048; New York and Vermont, Chazy group, Middle Ordovician, palaeo-depth of burial, 88M/4668; Texas, Leuders fm., siliciclastic grain breakage, displacement due to carbonate crystal growth, 88M/3007; USSR, Omolon region, Upper Famennian-Tournaisian, sedimentol., lithogeochem., 88M/4035

- —, clastic, very low-grade metamorphism of, 88M/4676
- —, clay, epigenesis in petroliferous areas, 88M/2287; Austrian Molasse, migration of radionuclides (Sr-90, Cs-137) in, 88M/0149; China, Henan Province, clay mins., in clay rocks, 88M/1720; Denmark, Stevns Klint, Cretaceous-Tertiary boundary, Ir, S isotopes, REE in, 88M/4012; England, London Clay, effect of weathering on strength of, 88M/3418; Italy, Puglia, Terra

d'Otranto, min., chem., grain-size features, 88M/0169; Viterbo, Orte, clay-sand suite. Plio-Pleistocene, geochem., 88M/0766; Mediterranean Sea, post-sedimentational processes in internal seas, 88M/2982; Poland, Ti mins. in, 88M/0175; Biata Góraregion, Tomaszów basin, Neocomian, min. compns., 88M/0174; Lower Silesia, Turoszów trough, mineralogy, 88M/1741; Lunliniec and Wieruszów, Upper Rhaetian, Lower Jurassic, min. study, 88M/0172; USSR, Gissar Ridge, Upper Cretaceous, effects of palaeohydrochem. condns. of formation on Al, Ga in, 88M/0771

— —, organic C-rich, Australia, hydrocarbon biomarkers from, 88M/2435; North Sea, Sola fm., Lower Cretaceous, sedimentol.,

geochem., 88M/5699

——, pelitic, southern Africa, Archaean, Late Proterozoic to Palaeozoic, geochem. characteristics, significance for evolution of continental crust, 88M/4030; Italy, Bologna, Marzabotto, detailed study, 88M/0167

— —, psammitic, Scotland, Upper Morar, sedimentary structs., sequences within late. Proterozoic tidal shelf deposit, 88M/4356

——, red beds, USSR, Kazakhstan, Kokchetov Massif, hydrothermal-metasomatic formations in, 88M/0641

——, siliceous, *Spain, Tajo Basin*, use of term 'silcrete', 88M/2973

— —, siliciclastic, USA, Texas, Leuders fm., siliciclastic grain breakage, displacement due to carbonate crystal growth, 88M/3007

Sedimentation, Channel Islands, Jersey, Rozel conglomerate fm., alluvial fan, processes of, 88M/6322; Switzerland, Greifensee, natural and fallout radionuclides as geochem. tracers of, 88M/6328; Welsh Basin, and tectonics, 88M/1140

Sediments, application of U series disequilibrium concepts to sediment yield detn., 88M/5765; aquatic, polychlorinated biphenyl dechlorination in, 88M/0417; biotransformations of organosulphur compounds in, via 3-mercaptopropionate, 88M/5886; bottom, detn. of chlorinated benzenes in, by WCOT column gas chromatogr., 88M/1689; characterized by min. assocn. of fibrous quartz, siliceous sulphate pseudomorphs, of evaporite margins, 88M/6310; comparison between K/Ar, Rb/Sr dating of fine fractions, to date young diagenetic events, 88M/3985; cyanobacterial, micromorphol., mechanisms of biomineralization, 88M/0855; detn. of ²²⁸Th, ²³⁰Th, ²³²Th by anion exchange, nuclear spectrometry, 88M/4942; dinosterane and other steroidal hydrocarbons of dinoflagellate origin in. 88M/4127; environmentally contaminated, inter-lab. study on detn. of polychlorinated biphenyls in, 88M/5941; from diff. envts., distribn. of methylperylene isomers in, 88M/5883; Ga detn. in, by graphite furnace AAS using Ni matrix modification, 88M/1688; low-energy, stratiform Cu deposits hosted by, aspects of metal transport, 88M/0625; oxic, suboxic, steady-state diagenetic model for dissolved carbonate species, pH in porewaters of, 88M/0815; magnetotactic bacteria, and magnetofossils in, 88M/4787; metal speciation in, anal., effects, (book), 88M/4961, review, 88M/3981; normal fault geometry related to sediment compaction, burial, 88M/1184; physics of acquisition of post-depositional remanent magnetization, 88M/1525; sequential extraction techniques, problems, 88M/3286; slightly lithified, comparison of methods of isolating lipids (bitumoid A) from, 88M/4122; theory of non-local mixing within, 88M/6308; use of ICP spectrometry for anal. of, 88M/4950; Antarctica, diploptene in, 88M/4145; France, Haute-Provence, Vergons area, measurements of degree of diagenesis, organic matter maturation, smectite transformation, 88M/6361; Pacific, NE margin, feldspathic and mafic, petrogr., geochem., 88M/1444; Spain, Cordilleras, Triassic, iron oxides and colour of, application of Kubelka-Munk theory, 88M/0765; Sri Lanka, gem-bearing, geol., mineralogy, 88M/2103; Wales, Denbigh Moors. deformed, microstructs. in, 88M/1147; USA, Nevada, Golconda allochthon, siliceous, diagenetic controls on structl. evolution, 88M/1182

- -, æolian, central Sweden, TL dating, 88M/3200
- —, alluvial, *India*, *Pune*, calcretes in, min., geochem., 88M/1427; *Sri Lanka*, *REE* in, 88M/2315
- —, cave, England, Derbyshire, Masson Hill, magnetostratigr., 88M/4788
- —, deltaic, Africa, Niger Delta, envtl., diagenetic implications for REE geochem., 88M/4028; USA, Mississippi River delta front, contrasting mudflow and distal shelf deposits, clay mineralogy, 88M/1767
- —, desert dunes, Australia, TL, radiocarbon dating, 88M/1638
- -, estuarine, organic matter, surface props. of solid particles in mixing zone, 88M/3628; processes controlling phosphate adsorption by iron hydroxides in, 88M/5735; role of suspended sediments, phytoplankton in partitioning, transport of Ag, 88M/4004; SE Africa, Mgeni Estuary, subtropical, sedimentary envts., facies, 88M/6334; England, Ribble estuary, detn. of gamma emitting radionuclides in muds, silts, 88M/5317; England, Wirral Lancashire, radionuclides in, 88M/5318; India, E. coast, clay mineralogy, 88M/5022; Iraq, Tigris/Euphrates delta, anals., 88M/6332; Sweden, Bothnian Bay, As regeneration from, 88M/5315; USA, Potomac River and estuary, N distribn., ammonium in, 88M/1979; Washington, Puget Sound, Ag, Hg, Pb, Cu, Cd distribn., 88M/1982; Yugoslavia, example of sequential extraction anal., heavy metal distribn. in, example of sequential extraction anal., 88M/3627
- —, glacigenic, England, East Anglia, Banham Beds, petrol., 88M/4630; Greenland, evidence for two zones of debris entrainment beneath ice sheet, 88M/0762
- hydrothermal, ferruginous, biogenic influences on geochem. of, 88M/2619;

- Greece, Santorini, As, Sb, Bi in, 88M/5703; Pacific Ocean, Galapagos Rift, central valley of spreading centre, chem., min. anals., 88M/2341; Red Sea, Atlantis II Deep, fish debris in, record of activity, 88M/4027
- —, inland sea, Black Sea, Bulgarian shelf, shallow-water, rates of biogeochem. processes, 88M/4034
- —, lagoonal, Portugal, Obidos lagoon, granulometric study, 88M/2974; Red Sea, Jeddah, hypersaline, chem., 88M/4031
- -, lake, acid sensitive, accumulation of polycyclic aromatic hydrocarbons in. 88M/3633; hypersaline, S-containing compounds in S-rich crude oil from, geochem. implications, 88M/0851; metalcontaminated, bacteria as nucleation sites for authigenic mins. in, 88M/5736; ²¹⁰Pb dating by gamma-assay, 88M/4865; Recent, comparison of extraction techniques for bound carboxylic acids in, unsubstituted monocarboxylic acids, 88M/0840, 88M/0841; Australia, β-hydroxyacids, Victoria, continental, saline, modern dolomite deposition in, 88M/6341; South Australia, Coorong region, Pellet Lake, sedimentol., min., isotopic anal., 88M/4039; Canada, Nova Scotia, E. Kemptville area, lake bottom, lithophile elems, and exploration using, 88M/0891; SW Quebec, acid, co-diagenesis of S, Fe in, 88M/5734; England, Cumbria, diffusive ion flux of non-marine origin in, implications for elem. budgets in catchments, 88M/4009; India, Kashmir Himalayas, clay mineralogy, 88M/5718; Papua New Guinea, Lake Murray, tr. metal fractionation in, 88M/2320
- -, marine, clay, T, pH controls over isotopic fractionation during adsorption of B on, 88M/2338; organic P, C in, 88M/5893; heavy metal anals. in marine envt., 88M/4075; Holocene and mid-Cretaceous, organic C, metal accumulation rates in, palaeoceanographic significance, 88M/0844; influence of sedimentological features on tr. metal distribn. in, 88M/3980; intercalibration exercise for tr. metals in, 88M/5936; Mn, Cu fluxes from continental margin, 88M/0820; recent, from diff. envts., compositional similarities of non-solvent extractable fatty acids from, 88M/0856; recent, interstitial waters of, lipid geochem., 88M/5884; submarine fan, characteristics, models, classification, reservoir potential, 88M/4622; Adriatic Sea, Gulf of Trieste, nutrients in pore-waters, 88M/4093; Arabian Sea, U distribn., origin, 88M/5715; Arctic Ocean, Alpha Ridge, CESAR cores, late Cainozoic, clay mineralogy, 88M/1746; Atlantic Ocean, Nova Scotian Rise, deep-sea sediment transport storm, 88M/4666; N Atlantic, Nd isotopes as tracers in, 88M/5691; Gt. Meteor East, Southern Nares Abyssal Plain, U in pore-waters from, 88M/4080; Laurentian Trough, Se profiles in, 88M/5689; NW Atlantic continental margin, organic C oxidation, preservation in, 88M/2453; Western Australia, Swan Coastal Plain, calcilutite, lithol., 88M/6340;

Baltic Sea, bottom, Fe-bearing mins. in, 88M/1744; distribn., poss. sources of elems. in sediment cores, 88M/5694; peculiarities of tr. metal distribn. in, 88M/5693; Bay of Bengal, distribn. of biochem. compounds in, 88M/5917; Canada, Hudson Bay Lowland, raised marine, Quaternary, TL props., age estimates, 88M/4913; Greece, Evoikos Gulf, from mining waste disposal area, gamma-spectroscopy in, 88M/5325; Gulf of Aden, Tajura rift, sediment diagenesis, biogeochem., 88M/5707; Italy, Naples, Porto di Bagnoli, shallow, heavy metal pollution study, 88M/0409; Japan, around Ryukyu Is., fluctuation of carbonate, interstitial-exchangeable elems. 88M/5733; Hokkaido, Ishikari Bay, heavy min. compn., 88M/2991; Mediterranean Sea and Gulf of Mexico, Tyro and Orca basins, S, organic C contents in sediment cores, 88M/0793; Norwegian-Greenland Sea, DSDP samples, chem., 88M/2295; USA, California, Santa Monica Basin, budgets, behaviours of U, Th series isotopes in, 88M/0794; Gulf of California, varved, variations of upwelling intensity recorded during past 3000 years, 88M/2340; continental margin off southern New England, organic geochem., amino acids, carbohydrates, lignin, 88M/2444, lipids, 88M/2445; Washington, Puget Sound, shallow, factors affecting pore water hydrocarbon concentrations, 88M/0416

- —, —, anoxic, characterization of iron sulphide mins. in, 88M/3287; complete oxidation of solid phase sulphides by Mn, bacteria in, 88M/5357; recent, anal., distribn. of iron sulphide mins. in, 88M/4311
- -, --, coastal, adsorption of short-chain organic acids onto, 88M/0860; and hemipelagic, influence of humic stubstances on geochem. of I in, 88M/2418; deep, sulphate reduction in, 88M/2329; detn. of natural radionuclides in, inter-lab. comparison, 88M/5939; distribn... dissolution of several forms of P in. 88M/4038; evaluation of diffusion coefficients of radionuclides in, 88M/5324; oxic, pigment preservation, remineralization in, 88M/4154; ²³⁸Pu heat source in, formation of protective concretion, 88M/0418; sedimentary sulphides in, 88M/4051; Denmark, early diagenesis in, microbial activity, Mn-Fe-S geochem., 88M/0763; Italy, Adige River estuary and N. Adriatic, distribu., behaviour of 137Cs, 88M/3635; New Zealand, Manukau Harbour, Cu, Cr, Pb in, 88M/5333; South Otago continental shelf, sand wedge, Holocene evolution, 88M/1433; Upper Waitemata Harbour, Lucas Creek, shallow tidal creek, sedimentation patterns, catchment use change recorded in, 88M/5334; Scotland, Loch Etive, geochem. assocns., post-depositional mobility of heavy metals in, 88M/2297; Sri Lanka, inter-tidal, REE in, 88M/2315; USA, North Carolina, Cape Lookout Bight, biogeochem. cycling in organic-rich basin, S isotopic budget balanced by differential diffusion

across sediment—water interface, 88M/0415, S mass balance, O uptake, sulphide retention, 88M/0414, sedimentary N, P budgets, 88M/0412, temporal, spatial variations in sulphate reduction rates, 88M/0413; Washington, long-chain n-aldehydes in, geochem. study, 88M/0857

—, —, continental shelf, N. Atlantic, shelf, slope, deep-sea, pore water study, geochem. of fallout Pu, 88M/1952; India, off N. part of E. coast, clay min. distribn. in, 88M/3409; New Zealand, South Otago, modern-Holocene, budget for, 88M/6343

—, —, continental slope, USA, Washington, cycling of fallout, natural radionuclides in, 88M/0405

—, —, deep, ¹⁰Be in core, ¹⁰Be production changes over past 420 ka, 88M/3982; carbonate, origin of celestite in, 88M/4324; carbonate, reading C isotope signal, 88M/3978; deep-sea fan, biol. community, geochem., 88M/0775; deep-sea surface, estimates of degradable organic C in, from ¹⁴C concentrations, 88M/2454; extraterrestrial noble gases in, 88M/5729; non-pelagic, I diagenesis in, 88M/2292; relationship between pore-water C isotopic compn. and bottom water O concn., 88M/5766; surficial, geochem., 88M/2311

- -, --, ocean, baryte-opal-organic C assocn. in oceanic particulate matter, 88M/5690; DSDP samples, Mössbauer 88M/2323; oxidized, early diagenetic mobilization of metals in pore waters, 88M/5777; world, forecasting organic-C distribus. in, 88M/0846; N. Atlantic Ridge, foraminiferal, from cores, P in, comparison with P in limestones, 88M/0760; Indian Ocean, P in, 88M/0774; Japan, Ryukyu Islands, fluctuation of carbonate and interstitial-exchangeable elems. 88M/2319; E equatorial Pacific, effect of bioturbation, adsorption gradients on solid and dissolved Ra profiles in, 88M/0779; equatorial and S.W. Pacific, sediments Mn nodules and, 88M/2326
- —, pelagic, deep-sea, I diagenesis in, 88M/2291; Atlantic Ocean, Cape Verde abyssal plain, investigation of authigenic, diagenetic processes by chem. leaching of, 88M/5704; Zaïre Fan, tr. elem. fractionation, distribn. in, 88M/2306; equatorial N. Pacific, chem., mineralogy of haloed burrows in, 88M/0781
- —, metalliferous, central equatorial Pacific, Eocene–Oligocene, geochem., origin, 88M/0778; E Pacific Rise, DSDP samples, 88M/2325; REE in, 88M/0777; REE geochem., 88M/5601
- —, organic-rich, coastal marine basin, biogeochem. cycling in, sources, accumulation rates of plant-derived organic material, 88M/4159; reactivity in sea-water at 350°C, 500 bars, exptl., theoretical constraints, implications for hydrothermal system, 88M/0487; Israel, Hula Basin, S diagenesis in freshwater lignite, implication for S—C relationships in, 88M/4136
- ---, river, Austria, Danube, sediment transport, envtl. isotope study, 88M/5882; Belgium, Neufchâteau, monazite nodules in,

88M/4333; *Indian sub-continent*, transport, fractionation of Pb in, 88M/2312

- —, salt marsh, B, silica behaviour in, implications for palaeo-B distribns., early diagenesis of silica, 88M/2337; modelling solute transport, sulphate reduction in, 88M/0786; USA, Delaware, seasonal cycling of S, Fe in porewaters, 88M/5841; temporal variations of sedimentary S in, 88M/5739
- -, stream, min. basis for interpn. of multi-element (ICP-AES), oxalic acid, aqua regia partial digestions for reconnaissance exploration geochem., 88M/0921; streambed, receiving high loadings of acid mine chem. characterization, 88M/5314; stream-bed, surface area, grain size, compn., relation to tr. elem. chem., 88M/3977; U concentration detn. using high resolution energy-dispersive XRF analyser, 88M/1697; Belgium, over Palaeozoic formations, geochem., 88M/4013; Canada, Saskatchewan, Cypress Hills, U and other tr., minor elem. concentrations 88M/2333; South Africa, Richtersveld area, geochem, evolution deduced from regional geochem. maps of, 88M/0889; Sri Lanka, anal. studies for identification of goldbearing areas, delineation of ultramafic bodies, 88M/0913; USA, Colorado, Wet Mts., Holocene, REE, min. changes in, 88M/5742
- —, volcaniclastic, silicic, U behaviour during formation, diagenetic alteration of, review, 88M/3842
- Seismic studies, compositional variation and origin of deep crustal reflections, 88M/4797; Andean continental margin off Peru, seabeam and seismic reflection imaging of tectonic regime, 88M/4852; England, Norfolk, Hunstanton, new seismic refraction evidence on origin of Bouguer anomaly low, 88M/6113; central England microcraton, CHARM II, deep reflection profile within, 88M/2688; offshore W. Ireland, Porcupine Basin, reflection study, 88M/3146; Italy, Calabria, model of velocity struct. beneath, based on lab. data, 88M/6462

Sekaninaite v. cordierite

- Selenium, in theoretical development, chemequilibria, theoretical development, 88M/4001; preconcentration of Se, Sb from sea-water for detn. by graphite furnace AAS, 88M/1687; Se(IV) detn. in sea-water by gas chromatogr. after coprecipitation with hydrous iron(III) oxide, 88M/0082; Britain, Se status of sheep indicated by wool Se concn., 88M/1957
- Sellaite, *Brazil, Brumado mine*, polarized absorption spectra in near IR, 88M/3123
- Semseyite, Wales, Deganwy, Bwlch mine, occurrence, 88M/6066
- Senaite, *Italy*, *Switzerland*, new findings, 88M/2617

Senandorite, crystal struct., 88M/5151

SENEGAL, Cape Verde Peninsula, Tertiary volcanism, petrol., 88M/1312; Guiers Lake, chem. study, 88M/4097

Sepiolite v. clay minerals

Serendibite, USA, New York, Johnsburg, Adirondack Mts., occurrence, 88M/4832

Sericite v. mica

- Serpentine, exptl. pseudomorphism of diopside by talc and, in (Ni,Mg)Cl₂ aqueous solutions, 88M/3735; from Ni deposits, solubility of, 88M/5183; metal extraction by use of melted ammonium sulphate, 88M/5475
- , antigorite, polysomatism, behaviour during progressive metamorphism, 88M/6037;
 USA, Pennsylvania, Lancaster County, Cedar Hill Quarry, assoc. with nakauriite, 88M/1061
- —, chrysotile, c.e.c., surface charge measurement, 88M/1802; changes of props. by heat-treatment, 88M/5473; electron diffraction patterns, effect of specimen orientation, 88M/5113
- —, garnierite, flotation using chelating reagents, anionic collectors, 88M/1859
- —, greenalite-magnetite-sulphide-carbonate paragenesis, *Spain, Murcia, Sierra de Cartagena*, oxidation zones from, 88M/3531
- —, lizardite, and parent enstatite, XRD, TEM, 88M/1804; Ni, Mg, synthesis at 25-200°C, 88M/0566; orbital interactions in, perturbations of idealized two-dimensional, infinite silicate frame, 88M/5109
- —, lizardite-1T, lizardite-2H1, Italy, Coli, crystal structs., 88M/1803
- -, water system at 100°C, 1 atm., H isotope fractionation in, 88M/5474
- Serpentinite, Oman, black carbonaceous calcite assoc. with, 88M/6071; Poland, Mikołajów, rodingite from, 88M/4722; Scotland, Ballantrae complex, xenolith suite in, 88M/6155; Perthshire, Corrycharmaig, Dalradian ultramafic intrusion, 88M/2825; Spain, Galicia, weathering of, 88M/5031

Serpentinization, USA, Kansas, and origin of H gas in, 88M/3838

Serpierite, England, N. Pennine Orefield, occurrence, 88M/1559

- SEYCHELLES, micro-continent, continental crust, on basis of seismic struct., rock types, 88M/2232
- Shale, combustible, method to examine S distribus. in processing of, from single specimen, 88M/0079; Eocene, isotopic compns., probable origins of organic molecules in, 88M/2446; Jurassic. contrasting biofacies, pyrite formation in, 88M/1408; Lias δ, NW Germany, molecular measurements of maturity for, 88M/5916; movement of hydrocarbons in, 88M/4124; occurrence, geochem. significance of 1,2,5,6-tetramethylnaphthalene 88M/4153; Bangladesh, Bengal basin, Surma group, implication of diagenesis on cementation of reservoir sandstones, 88M/4659; Canada, North West Territories, Dist. of Mackenzie, Husky fm., sedimentol., stratigr., 88M/3001; Japan, Shikoku dist., Palaeozoic-Cainozoic, chem. variation, 88M/2318; North America, Cretaceous, pyrite isotopic compn., relationship to organic matter type, iron availability in, 88M/3990; South Africa, Witwatersrand Supergroup, Archaean, geochem., source-

- area weathering, provenance, 88M/2307; Spain, Almadén, illite-kaolinite-pyrophyllite in, 88M/5018; Cantabrian Zone, Cambrian Carboniferous, min., geochem., 88M/1765; USA, Appalachian basin, Devonian, C, S relationships in, 88M/2336; California, Salton Sea, geothermally altered, microstructs., formation mechanisms, depth-zoning of phyllosilicates in, 88M/6373; Kansas, Shawnee group, Heebner Shale member, XRD min. detn., 88M/4670; Utah, Phosphoria fm., effects of weathering on biol, marker, aromatic hydrocarbon compn. of organic matter in. 88M/2448
- -, black, model for genesis of U deposits in, 88M/3888; Na hypochlorite as aid to extraction of clay mins. from, 88M/5000; Atlantic Ocean, Angola Basin, formation condns., organic matter geochem., 88M/5705; Belgium, syngenetic concentration in, 88M/3873; Switzerland, Alps, metamorphic control of magnetic mineralogy of, toward use of 'magnetic isogrades', 88M/3140; USA, midcontinent region, Desmoinesian Excello, petrol., 88M/0185; USSR, Pay-Khoy and N. Urals, Hg geochem., 88M/2308; Urals, Lemva zone, geochem, identification of volcanic material in, 88M/3941
- -, oil shale, and ash, tr. elem. compn., NAA, 88M/2430; petrogr. classification, 88M/4626; Australia, elem. abundance data, 88M/5892; Queensland, Condor deposit, geochem., min. residences of tr. elems. in, 88M/5724; Rundle, effect of igneous intrusion on, 88M/2436; Brazil, Parana basin, Irati fm., kerogen, ESR study, 88M/2456; Canada, geochem., geol. factors governing exploitation of, 88M/2443
- Shandite, Ni₃Pb₂S₂, Greenland, Isua supracrustal belt, in serpentinized metadunite, 88M/1052
- Shoshonite, formation of, from calc-alkaline basalt magmas, geochem., exptl. constraints from type locality, 88M/6217; Scotland, Caledonides, occurrence, tectonic implications, 88M/0700
- Shoshonitic rocks, Spain, Galicia, Macizo de Cabo Ortegal, petrol., 88M/6235
- series, characteristics, 88M/6224
- Siderite, synthesis of, 88M/0542; E Alps, C, O isotopes in, 88M/2141; Australia, Victoria, Clunes Goldfield, occurrence, 88M/6074
- concretions, Poland, Upper Silesia, coal mine. 'Szczygłowice' characteristics, origin, 88M/2646
- -- sulphosalt mineralization, USSR, Siberia, min.-geochem. characteristics, 88M/0621
- Sideronatrite, Italy, Tuscany, Cetine mine, occurrence in oxidation zone, 88M/1059
- Sidwillite, named after Sidney Arthur Williams (1933-), biogr., 88M/4842
- Sieleckiite, Australia, Queensland, Mt. Oxide, new Cu Al phosphate, 88M/6097
- SIERRA LEONE, footslope laterites, compn., geomorphol. significance, 88M/2302; W., Kasila group, Archaean, geol., relations with granite-greenstone terrain, 88M/6409

- Silica, and total alkali weight percentages, unreliability of, as main classification parameters in petrol., 88M/1225; aqueous, in aqueous complex solutions at various T, prediction of thermodynamic behaviour of, 88M/3815; behaviour in salt-marsh sediments, implications for early diagenesis, 88M/2337; bioleaching of, from magnesite ore, 88M/0635; dissolved, diffusion in dilute aqueous solution, 88M/2020; energy gap and density in SiO2 polymorphs, 88M/6440; in duric soils, depositional model, 88M/3427, mineralogy, 88M/3428; pure vitreous, optical characteristics of semitransparent porous media, 88M/4784; SiO₂ liquid, application of empirical ionic models to, 88M/0440; spectrophotometric detn. in metallurgical-grade fluorspar, 88M/4935; USA, California borderland basins, biogenic, benthic fluxes, cycling of, 88M/0837
- bead industry, India, Gujarat, Cambay, 88M/5502
- gel, acidity detn., 88M/3685
- grains, detrital, England, Hampshire Basin, Barton fm., glauconitization, 88M/2965
- resources, USA, Wyoming, Albany County, Plumbago Creek, of sandstone, 88M/5309
- Silicate crystals, resonance bond numbers, graph-theoretic study of bond length variations in, 88M/5084
- glasses, and crystals, vibrational interactions of tetrahedra in, 88M/5078; by ²⁹Si NMR, 88M/3445; densified, general refractivity formula applied to, 88M/6449; effects of quench methods on Fe3+/Fe2 ratios, Mössbauer, wet-chem. study, ion 88M/0671; dynamics studies, 88M/5081: nature of P-induced coordination changes in, 88M/3652; spectro-scopic evidence for P-induced coordination changes in, 88M/5363; synthetic, natural, viscosity at high T, P, 88M/3121; X-ray absorption spectroscopic studies, 88M/5080; Libya, type of tektite, Mössbauer effect study, 88M/2540
- liquids, behaviour of noble gases in, solution, diffusion, bubbles, surface effects, applications to natural samples, 88M/0466; in, systems NaAlSi₃O₈-CO₂, CaAl₂Si₂O₈-CO₂, KAlSi₃O₈-CO₂, ion dynamics 88M/5081; magma density at high P, effect of compn. on elastic props. of, 88M/0469; thermodynamics, 88M/1990
- melts v. melts, silicate
- minerals, coarsening of fine-scale exsolution lamellae, 88M/0436; magnetic susceptibilities of standard samples of, 88M/3129; natural, comparative study of ²²²Rn, ⁴⁰Ar, ³⁹Ar, ³⁷Ar leakage from rocks, mins., implications for role of nanopores in gas transport through, 88M/5559; new synthetic, with highly charged mica-type layers, characterization, props., 88M/0562; in transformation regularity hydrothermal condns., 88M/0637; sheet, ferromagnetic or antiferromagnetic Fe III spin configurations in, 88M/5108; struct., calculations of ²⁹Si MAS NMR chem. shift

- 88M/5085; X-ray absorption spectroscopic studies, 88M/5080
- rocks, calculation of calibration line parameters, Theil's incomplete method, least-squares regression, comparison, 88M/4943; magnetic susceptibilities of standard samples of, 88M/3129; tr. elems. in, XRF detn., 88M/1696
- systems, Ba₂SiO₄-Ca₂SiO₄, phases in, 88M/3725
- Silicates, 2:1 layer, ²⁹Si NMR spectroscopy, correlations among chem. shift, structl. distortions, chem. variations, 88M/1805; ammonium, assoc. with sedimentary exhalative ore deposits, 88M/2471; amorphous and crystalline, biogenic etching of microfractures in, 88M/0508; binary orthosilicates, energies, interactions in, Born parametrization, 88M/3723; copper(II), with chain structs., crystal chem., 88M/5105; framework, enumeration of 4-connected 3-D nets and classification of, body-centred cubic nets based on rhombicuboctahedron, 88M/1808; H, C in solid solution in, 88M/5079; influence of water on high-P melting behaviour, 88M/1992; kinetics of reaction with aqueous solutions, 88M/3681; metamict, characterization of amorphous state in, EXAFS, XANES anals., Mg, Mn orthosilicates, 88M/5089; thermodynamic mixing functions for, derived from data on solid solution-chloride melt equilibria, 88M/5452; modulated 2:1 layer, review, systematics, predictions, 88M/0255; non-crystalline, dissolution techniques, comparative study, application to identification, quantitative detn. of, 88M/4985; orthosilicates, transient creep in, 88M/4762
- Silicon compounds, SiC, interstellar, from Murray meteorite, large isotopic anomalies of Si, C, N, noble gases in, 88M/4225
- crystals, characterization of lattice defects
- by double crystal diffractometer, 88M/3439 isotopes, ³²Si, *Atlantic*, cosmogenic, vertical profiles, 88M/4081
- Sillimanite, black cat's eye, gem trade lab notes, 88M/5517; produced by base-cation leaching, contact metamorphism of felsic igneous rocks, 88M/1457; Sweden, W. Bergslagen, Gåsborn area, in hydrothermal vein, 88M/4257
- Silt, China, Yellow River, marine dispersal, deposition of, by gravity-driven underflows, 88M/6338
- Siltstones, Antarctica, Victoria Land, Beacon Supergroup, steranes, triterpanes in, 88M/2438
- Silver, comparative marine chem., 88M/0590; from museum collection, SEM study, 88M/2609; influence of climate, geomorphol., primary geol. on supergene migration of, 88M/2178; role of suspended sediments, phytoplankton in partitioning, transport of, in estuaries, 88M/4004; transformation of schistose material in presence of, 88M/0452; Germany, Black Forest, Grube Sophia, historical notes, 88M/1581; Norway, Kongsberg, and assoc. mins., occurrence, 88M/4799; USA, Arizona, crustal heritage of ratio in ores,

- 88M/3564; Idaho, Thunder Mountain caldera complex, residence of Ag in min. deposits, 88M/0663
- compounds, Ag(I) chloride complexes in aqueous solution at 273–623 K, thermodynamic parameters, 88M/2017
- deposits, Pacific Rim, regional distribu., 88M/5602
- ores, Spain, Central system, Tamajón-Campillo de Ranas, characteristics, 88M/0342; Turkey, Gümüsköy, min. paragenesis, geochem., 88M/3590
- systems, Ag₂S–Sb₂S₃, high-T reaction calorimetry of solid, liquid phases in, 88M/3763
- -nickel-cobalt mineral association, England, Cumbria, Garrigill, Tynebottom Mine, 88M/1051
- Sinhalite, USA, New York, Johnsburg, Adirondack Mts., occurrence, 88M/4832
- Sinter resources, USA, Wyoming, report, 88M/1948
- Skarn, and greisen compound deposit, mineralization, alteration, 88M/5258; scheelite, evaluation of roles of magmatic source and process, 88M/2146; Australia, Queensland, Mary Kathleen, REE, U mins. present as daughter crystals in fluid inclusions, 88M/0808; Canada, Quebec, Gatineau, fluorapatite and assoc. mins., compn., 88M/6075; Tombstone Mts, hedenbergitic, Au-Cu-Bi mineralization in, 88M/5291; China, Anhui province, Tongshan Cu deposit, REE geochem., 88M/0644; India, Himachal Himalaya, Chaur Hill, zoned, mineralogy, genesis, 88M/4737; central Morocco, REE behaviour during thermal metamorphism, hydrothermal infiltration assoc. with, 88M/5751; Portugal, St. Adrião, petrol., geochem., 88M/1451; Spain, Central system, ore deposits related to, 88M/0340; USA, California, Darwin polymetallic skarn dist., intrusive, calc-silicate compositional data used to distinguish contrasting types, 88M/1870; Maine, mins. of, 88M/4826; New Mexico, central mining dist., zonation, fluid evolution, 88M/0391; USSR, Gornyi Altai, Sinyukhinskoe ore area, skarn formation and K metasomatism, 88M/4687; Polar Yakutia, genetic features multicoloured diopside crystals from, 88M/4252
- deposits, stratiform, influence of sedimentary envt. on development of, 88M/3511; W-Sn, and related rocks, (book), 88M/1710; France, Ariège, Salau, compositional evolution of calc silicates from, 88M/2576
- mineralization, Czechoslovakia, Spišskogemerské rudohorie Mts., 88M/0344
- minerals, Ca-Fe ratio in supercritical chloride fluid in equilibrium with, 88M/5374; Finland, Karelia, Cr-bearing, min., geochem. aspects of, 88M/2613
- -scheelite deposit, USSR, Kirghiziya, Kensuyskoe, geol. condns. governing formation, 88M/5252
- Skutterudite, synthetic Sb-analogue of, struct. refinement, 88M/3502

- Slags, Germany, Schieder Village, fayaliterich, of medieval iron-works, spinifex textures, texture zoning in, 88M/5378
- Slate, anchizonal, significance of ⁴⁰Ar/³⁹Ar age spectra of whole-rock and constituent grain-size fractions from, 88M/3191; mathematical model relationship between paramagnetic anisotropy and strain in, 88M/4789; *Canada, Nova Scotia, Goldenville fm.*, and sandstone, metamorphosed interbedded, 88M/2997

Smectite v. clay minerals

- Smolianinovite group, fahleite, *Namibia*, *Tsumeb*, new min., 88M/6089
- Soda samples, diff. methods for anal. of, 88M/3282
- Sodalite, cubic aluminate, struct., 88M/5141; Na-poor, crystal struct., Rietveld profile anal., 88M/1815
- Sodium compounds, NaCl, natural, synthetic, dislocation density, stress relationships in, 88M/6448; NaCl, thermal expansion of solids, review, 88M/1508; sodium tetracopper (II) triarsenate (V), hydrothermal synthesis, struct., 88M/0534 Soil gas v. gas, soil
- minerals, relationship between energy of crystalline lattice and enthalpy of, 88M/5038
- thin sections, multi-orientation thin sectioning for detn. of 3-D morphol., 88M/0124; method for replacing water from samples high in clay with NaCl solution prior to thin-section prepn., 88M/4927
- Soils, anal. of alpha, beta activities using large area Si surface barrier detectors, 88M/4954; and groundwaters, distribn. coefficients of radionuclides between, dependence on various test parameters, 88M/5313; calcite dissolution, precipitation in, under semi-arid condns., isotopic approach, 88M/5744; Cd sorption at low concentrations, evidence of competition by other heavy metals, 88M/1722, model for Zn competition, 88M/1723; characteristics of F adsorption by, 88M/4000; chem. equilibria of Se in, theoretical development, 88M/4001; comparison of several spatial prediction methods for pH, 88M/0129; constant potential titration method for studying Cu²⁺ desorption kinetics, 88M/0135; crystallinity of kaolinites in relation to clay particle-size, soil age, 88M/5042; derived from volcanic ash, in temperate, tropical regions, origin of cristobalite in, 88M/1752; determining Ti source, distribn. within, by micromorphol., submicroscopy, elem. anal., 88M/3429; distribn. coefficients of Cd, Co, Ni, Zn in, 88M/5036; equilibrium chem, speciation of aqueous solutions, improvements program GEOCHEM, 88M/1711; formed in sillimanite mica schist residuum, soil genesis in developmental sequence of, 88M/3433; identification of clay mins. in, effect of sodium-pyrophosphate, 88M/4997; in situ exptl. bag method to study influence of envtl. factors on U mobilization, preconcentration in, 88M/2511; influence of iron oxides on Co adsorption by, 88M/0136; liquid magnetic separation of iron-bearing mins. from sand fractions of, 88M/3388;

metal speciation in, review, 88M/3981, anal., effects, (book), 88M/4961; of diff. taxonomic orders, influence of constituents on stability of mechanical separates of, 88M/1776; of Jurassic calcareous table-lands, variations in organic matter content, 88M/0204; P, S concn. at ped surfaces, 88M/0198; pedon zonation of hydroxy-interlayered mins. in, 88M/3431; physicochem. modelling of soil formation and weathering processes, 88M/3419; poss. biogenic formation of hydrated Al oxide mins. in, 88M/1779; quantitative detn. of clinoptilolite in, by cation-exchange capacity method, 88M/3383; radionuclide content vs grain size in soil samples, 88M/5688; salt effect in multicomponent variable charge system, 88M/0130; scheme for quantitative descripn. of macrostruct. by image anal., 88M/0125; sequential extraction techniques, problems, 88M/3286; significance of fractionation in dating age, turnover of organic matter in, 88M/5058; soil compaction in topsoil replacement during mining reclamation, 88M/0422; synthesis of single-domain and superparamagnetic magnetite in, 88M/3753; technique for separation of clinoptilolite from, 88M/3259; temperate, characteristics of organic matter in, by Curie-point pyrolysis-mass spectrometry, effect of drainage, illuviation in B horizons, 88M/0849; thermodynamic anal. of soda formation in, by Hilgard's reaction, 88M/3420; transformation of poorlycrystalline oxides during boiling with NaOH to concentrate iron oxides from, 88M/5035; U concentration detn. using high resolution energy-dispersive XRF analyser, 88M/1697; use of ICP spectrometry for anal. of, 88M/4950; use of track detectors for evaluation of emanating Ra content of, 88M/1674; weathering of silicates in, and migration of Si in river, groundwater in humid regions, 88M/3408; with diff. clay mineralogies, contribn. of sorbed Na, Ca to self-diffusion in, 88M/3373; Africa, sub-Sahara, management of, 88M/1589; Australia, Canberra, with textural contrast. compn., formation of grainy void cutans in. 88M/0181; Queensland, Thalanga, electrogeochem. patterns in, detection of blind mineralization beneath exotic cover, 88M/0876; Bolivia, Andes, mineralogies of silt, clay fractions of twelve profiles, 88M/0224; Brazil, effects of green manure on isotopically exchangeable phosphate in, 88M/0225; Canada, Nova Scotia, Forest Hill Au dist., dispersal of Au and related elems, in, 88M/2475; Ottawa, mineralogical variability of clay in map delineation of Brandon soil, 88M/0222; China, W. Hunan, in sub-tropical zone, heavy metal distribn., status, 88M/2317; Songliao Plain, envtl. background values of REE, U, Th in, 88M/5720; Colombia. Amazonas, Araracuara, four profiles, major, minor elems. geochem., mineralogy, 88M/3437; Egypt, rock, relief as soil forming factors, 88M/1772; England, Cumbria, particle size, radionuclide levels in, 88M/5316; W

Midlands, Wyre Forest, elucidation of soil pattern, multivariate distribn., 88M/0201. spatial distribn., 88M/0202; and Wales, total and extractable tr. elem. contents. 88M/1956; Fiji, extractable Al and pH, 88M/0131; relationship between clay content and 15 bar moisture retention for. 88M/5048; Taveuni, from basaltic ash. . 88M/0211; Vitu Levu, clay mineralogy, 88M/0212; France, Porte-aux-Moines, Kérouaran, Zn, Pb anomalies in soils related to mineralization, 88M/4019; W Greenland, Oagarssuk. overlying carbonatite complex, Nb, P dispersion in. 88M/0881; Himalayas, min. content of grasses, grasslands, tr. elem. distribn, in soil profiles, 88M/0208; India, benchmark, K release, fixation reactions, relation to 88M/5041; mineralogy, Italy. Terminillo, genesis, evolution, tr. elem. dynamics, 88M/1759; Kenya, derived from volcanic ash, clay mins. and humus complexes in, 88M/1763; Malaysia, inland, relationship between plasticity and physicochem., micromorphol. props., 88M/0210; New Zealand, K in, genetic soil classification, 88M/5047; on wet terraces, moraines, genesis, classification, 88M/5043; REE, tr. elems. in Fe-Mn concretions in, 88M/4041; Campbell Is., soil pattern, 88M/5046; Marlborough Sound, Maud Is., differentiation, chem., 88M/5050; North Island, allophane in, phys. props., 88M/5056; E. Otago, from weathered schist, formation, chem., mineralogy, 88M/5049; South Island, yellow-brown shallow and stony, allophane in, 88M/5057; South Island, W. Coast, chem., agricultural development, 88M/5336; wet-land, props., genesis. micropedology, 88M/5053, mineralogy, 88M/5052, particle size distribn., 88M/5051, type localities, profile morphol., soil chem., 88M/5045; Westmere, variability in silt loam in relation to size of sampling area, chem. variability, 88M/5054, morphol. variability, 88M/5055; Nigeria, mineralogy, cations, exchangeable 88M/0207; Pacific, Cook Is. and Tonga, urease, phosphatase, sulphatase activities of, 88M/5059; S Cook Group islands, occurrence of orders of soil taxonomy, 88M/0218; S Pacific, organic C detn., 88M/0127; Kiribati, S Tarawa, soil sequences, descriptn., 88M/0213; Niue, classification by soil taxonomy, 88M/0216; Papua New Guinea, development of micromorphol. features in relation to min., chem. props. of volcanic ash soils, 88M/0196; Poland, Lower Silesia, in sanitary protection zone around Cu smelters, min. compn., props., 88M/5326; Sudety Mts., developed on gneisses, clay mins. of, 88M/3403; Scotland, design of database for, 88M/0200; Spain, volcanic-ash, surface charge characteristics, effect of organic matter, min. compn., 88M/5039; La Coruña, on granite, detn. of mineralog. classes, 88M/0206; Piornedo, on granite, colloidal classification, of, props., mineralogy, 88M/0205; Tonga, Ha'apai group, effectiveness of soil taxonomy for

prediction of soil chem. props., 88M/0217; Turkey, sorption/desorption of Cs on, 88M/5010; USA, California, sand-sized kaolinized feldspar pseudomorphs in, 88M/5063; Colorado, Wet Mts., Holocene, REE, min. changes in, 88M/5742; Florida, with sandy epipedons, clay mineralogy related to morphol, of, 88M/5062; Gt. Smoky Mt. National Park, Pb in, 88M/1981; Hawaii. ferrihydrite, allophane implications for classification, 88M/5060; manganiferous soil concretion, comment, 88M/0220; REE in, 88M/0219; Iowa, and plants, sewage sludges, W content, 88M/5341; Michigan, fine clay mineralogy of soil matrices, clay films in two hydrosequences, 88M/3432; Missouri, Madison County, of mineralized area, use of factor anal. to differentiate pollutants from other tr. metals in, 88M/0421; Montana, pedogenic replacement of aluminosilicate grains by CaCO3 in, 88M/5061; Texas, clinoptilolite in, 88M/1014; Rolling Plains, micromorphic record, interpns, of carbonate forms in, 88M/3436; Virginia, above deeply weathered pegmatites, tr. elem. distribn. in, implications for exploration, 88M/0785; Western Samoa, effects of drying on mineral N status, 88M/0215; Zimbabwe, B horizons, clay mineralogy, 88M/5040

- acidic forest, weathering of mica introduced into, 88M/0190
- —, Andisols, non-allophanic, genesis, props., 88M/1753; USA, Oregon, clay mineralogical, chem. props., 88M/3435
- —, Andosols, Spain, Galicia, developed from non-volcanic materials, 88M/3423
- -, clay, detn. of macroporosity impregnated blocks of, relation volumetric water content, 88M/4993; effect of successive wet/dry cycles on aggregate size distribn. in, 88M/5037; model to describe fluctuation of soil water content of, as function of vertical macroscopic movement. 88M/3421: results electro-osmosis carried out in, 88M/5005; undisturbed. convection-dispersion equation, transfer function model for predicting chloride leaching through, comparison, 88M/0126
- —, duric, silica in, depositional model, 88M/3427, mineralogy, 88M/3428
- —, fragipans, USA, Kentucky, thermodynamic evaluation of amorphous aluminosilicate binding agents in, 88M/1718
- —, Fragiudalfs, USA, Kentucky, min. solubility relationships in, 88M/1777
- —, gley, *Poland, Wroclaw*, developed on alluvial loams, clay mins. of, 88M/3402
- —, Haplaquods, USA, Florida, clay min. relationships in, 88M/1778
- , kaolinitic, Australia, Queensland, size, charge characteristics, 88M/1771
 , lateritic, Western Australia, iron oxides in,
- 88M/3425
 —, loams, Belgium, min., chem., phys. props.,

88M/3398

—, magnesian, *New Caledonia*, restoration of balance of base exchange complex, 88M/0214

- —, podzols, Australia, humus iron, micromorphol., analytical studies of fine matrix of, 88M/3426; England, Devon, Yarner Wood, hardpan, features of, 88M/0203; Pacific, Tahiti, with gibbsite, anatase, 88M/3422
- —, red, Australia, Queensland, distribn., nature, origin of red sesquioxidic materials beneath, 88M/3430
- —, residual, geochem. of, as aid to geol. mapping, statistical approach, 88M/0596; Nigeria, tropical, overlying talc deposit, mineralogy, geochem. dispersion in, 88M/2466
- —, saline, USA, North Dakota, evaporite mineralogy, groundwater chem. assoc. with, 88M/3434
- —, vertisols, optical density of vertisol clay suspension in relation to sediment volumes and dithionite-citrate-bicarbonateextractable iron, 88M/0154

SOUTH AFRICA, alluvial diamonds, accumulation of, 88M/6335; and alusite, prepn., certification of ref. material, 88M/5940; coastal, marine mins. potential, 88M/3607; development of radiometric sorter for gold ores, 88M/1673; filamentous microfossils in early Proterozoic Transvaal Supergroup, morphol., significance, palaeoenvtl. setting, 88M/1587; investigations, interprise of vertical distribution of U, Th, K, 88M/3843; Pb isotopic signatures, comparisons with Western Australia, 88M/0033; peridotites, majorite fractionation recorded in geochem., 88M/5639; Barberton mountain belt, Jamestown ophiolite complex, section through 3500 m.y. oceanic crust, 88M/2943; Barberton Mountain Land, gold, genesis, exhalite source-bed concept, 88M/3546; Barberton Mountain Land, origin, timing of metasomatic silicification of Archaean komatiite sequence, 88M/3025; Bushveld complex, Au, Ir, Ni, Co in chromitites, geochem. of contrasting 88M/0720; siliceous magmatic suites, genetic aspects, implications for tectonic discrimination diagrams, 88M/0677; hydrothermal system, petrol. evidence, 88M/6365; magnetite, tr. elem. diffusion during bottom double-diffusive crystallization of convection systems, 88M/4495; origin of colour zoning in cassiterite from tin 88M/2610: postcumulus deposits. modification of magnetite grains in upper zone, 88M/2615; Makhutso granite, age, genetic relationships, 88M/3226; Nebo granite, implications of new U/Pb zircon age, 88M/4894; Bushveld complex, Upper Critical Zone, regional trends of chem. variation, thermal erosion, 88M/2846; Sr isotopic evidence against magma addition, 88M/2231; use of P content in estimates of proportion of trapped liquid in cumulates, 88M/2847; Cape Province, melilitites, petrol., relationship to kimberlites, 88M/1260; Clarens, vivianite in late Pleistocene swamp deposits, 88M/1075; Dominion conglomerates, late-Archaean, new aspects of derivation, relationship with Witwatersrand, 88M/3897; Dominion

group, Rhenosterhoek fm., late Archaean geochem., volcanic rocks, origin, 88M/3946; Hamersley and Michipicoten, banded iron formations, Nd isotopic study, source of REE, Fe in Archaean oceans, 88M/4066; Jagersfontein, relationships between eclogites and megacrysts from kimberlite, 88M/1259; Johannesburg-Pretoria granite dome, Archaean tonalitic gneiss, U/Pb dating, 88M/1624; Kaapvaal Murchison and Sutherland craton. of ore greenstone belts, timing emplacement, deformation, 88M/0333; Murchison granite-greenstone terrain, Rooiwater complex, and assoc. rocks, petrol., 88M/6184; Kalahari Desert, Wessels mine, sugilite, occurrence, gemological props., 88M/2101; Kalahari Mn field, Hotazel fm., early Proterozoic, physicochem. envts. for formation of quartz-free Mn oxide ores, 88M/0347; Kenhardt dist., Namaqua Province, deformation along E. boundary, 88M/1167; Kimberley, evidence for metasomatism in peridotite 88M/3015; Lease granite, granophyric, miarolitic mineralized at apical region of Sn-W system, 88M/1262; S. marginal zone of Limpopo Belt, fluid inclusions in hydrated granulite facies rocks, 88M/5546; Namaqua mobile belt, anorthosite-diorite suite, REE geochem., 88M/5638; Keimoes area, Ti-dumortierite, occurrence, min. data, 88M/2555; Keimoes suite, two dissimilar granites, geochem., petrogenetic relationships, 88M/1261; Namaqualand, Aggeneys, chem., origin of zincian spinel assoc. with Cu-Pb-Zn-Ag deposits, 88M/4293; Aggeneys, Bushmanland group, heavy min. layers, evidence of clastic origin for 88M/1484; quartzite genesis, Namaqualand, pelitic gneisses, metamorphic zonation, thermal history, 88M/1485; Natal, Proterozoic intrusion, deformation of deep crustal 'sills' along S. coast, 88M/6121; Sr isotopes in Proterozoic carbonate metasediments, constraints on formation of Natal Structural and Metamorphic Province, 88M/5753; Ngoye granite-gneiss formation, diff. granite types, descripn., 88M/1258; Natal, Edward-Port Shepstone area, granitic rocks, petrogr., Rb-Sr isotope, geochem. characteristics, 88M/1257; Northwest Cape, Boksputs, strata-bound Cu-Fe sulphide deposit in Proterozoic front arc setting, poss. Besshi-type deposit, 88M/0374; off Richards Bay, petroleum hydrocarbons in surface microlayer, sampling, GC-FID, GC/MS anal., 88M/2428; Orange River Vioolsdrif batholith, relationships, two stage emplacement history, extent of Kibaran overprinting, 88M/1625; Piet Retief, Archaean supracrustal and granitic rocks, prelim. note, 88M/3087; pre-Witwatersrand basement, granitic rocks, clues to source of U placer mineralization, 88M/5176; Pretoria, Fairfield borehole, Bushveld complex, rocks. geochronol., isotopic studies, 88M/6185; Richtersveld area, geochem.

evolution deduced from regional geochem. maps of stream sediments, 88M/0889; Roberts Victor eclogites, O isotopes in garnets, clinopyroxenes, phlogopite, implications for petrogenesis, mantle metasomatism, 88M/0804; Roberts Victor, kimberlite, diamonds, C isotopic compn., N content, inclusion compn., evidence for ¹³C depletion in mantle, 88M/0612: Transvaal, effects of Rb, Cs, Tl on interlayer K release from vermiculite, 88M/1721; Barberton greenstone belt, stratiform gold ores, metamorphic features, 88M/0318; Transvaal sequence, Penge iron formation, metamorphic evidence of early post-Bushveld sills, 88M/3085; Transvaal, gold extraction from concentrates by roasting, cyanidation, 88M/5200; West Waterberg, tonstein, petrol., min., geochem., 88M/5021; Witwatersrand, problems with placer model for gold deposits, 88M/3547; Vardenskraal, hydrothermally altered peraluminous Archaean granites as provenance model for Witwatersrand sediments, 88M/1863; Witwatersrand goldfields, condns. during peak metamorphism, 88M/1486; fluid metamorphism, infiltration during generation of chloritoid, pyrophyllite, 88M/6412; Witwatersrand quartzites, bedding-parallel shear, thrusting in quartz vein formation, 88M/1168; Witwatersrand Supergroup, Archaean shales, geochem., weathering, provenance, source-area 88M/2307; Witwatersrand and Ventersdorp supergroups, pseudotachylite assoc. with bedding-parallel fault zone between, 88M/6411; Zaaiplaats, tin deposits, fluid inclusion study, 88M/2160; Zaaiplaats area, Bushveld, Ba partitioning between coexisting K-feldspars and plagioclase in granites, 88M/2593; crystallization of tin-bearing granites, 88M/2845

SOUTH AMERICA, mantle xenoliths, occurrence, 88M/2738; E, major Precambrian terrains, regional, chronol. evolution, 88M/2707; Amazon River and estuary, sources, transport of particulate organic C, 88M/4167

SOUTH CHINA SEA, *central basin*, distribn. characteristics of heat flow, 88M/1551

SOUTH GEORGIA, Cumberland Bay and Sandebugten fms., relationships between, tectonic implications, 88M/6417; Larsen Harbour fm., ophiolite, geol., 88M/4407

SPAIN, poss. occurrence of diamond. bibliogr., 88M/6473; U ore occurrences in metasedimentary rocks. 88M/3530: volcanic-ash soils, surface characteristics, effect of organic matter, min. compn., 88M/5039; SE, Neogene evolution, sedimentary evidence. 88M/2971; W, Au-Ag reconnaissance programme of sulphide-bearing quartz veins, 88M/0905; W deposits, economic classification, 88M/5192; Almadén, illitekaolinite-pyrophyllite in shales, arenites, 88M/5018; Almeria, Cabo de Gata region, bentonite, chem., min. characteristics, 88M/3354; Alpujarrides, Alpine Triassic fluorite-(baryte-)Pb-Zn deposits, facies

control of strata-bound ore deposits in carbonate rocks, 88M/1878; Arinteiro, marble and amphibolite, metamorphic interactions, 88M/4715; Avila, deformed leucogranites, petrol., struct., 88M/1241; Barcelona province, Plana de Vic, replacement of Sr by Ba in celestine, 88M/4821; Betic Cordillera, iron oxides and colour of Triassic sediments, application of Kubelka-Munk theory, 88M/0765; Neogene basins evolving in crustal transcurrent shear zone, tectonic-sedimentary characters, 88M/1161; Hinojar, Mazarrón, evolution of marine Neogene basins, 88M/1162; Nevado-Filabride complex, metabasites, geochem., relics of ophiolitic sequence, 88M/2207; Caceres, Logrosán, adamellite, petrol., geochem, 88M/0630; Cantabria, Cambrian to Carboniferous shales, min., geochem., 88M/1765; *Caborredondo*, dolomites, formation of, 88M/6325; Suances estuary, heavy metal pollution, 88M/5322; Careres, Parilla ore deposit, Sn-W mineralization, hydrothermal fluid evolution, 88M/1908; Catalonia, Montnègre pluton, Rb/Sr dating, comparison with Hercynian granites from Pyrenees, Sardinia, Corsica, 88M/3215; Catalonian Coastal Range, Poblet, scheelite-bearing quartz veins, characterization of fluid inclusions, genetic model, 88M/2153; Central system, ore deposits related to skarns, 88M/0340; Avila batholith, origin of cordierite in granitic rocks, 88M/2838; Colmenar de Arroyo, baryte-fluorite deposit, genetic aspects, 88M/3580; Tamajón-Campillo de Ranas, Ag ores, characteristics, 88M/0342; Somosierra-Guadarrama Sector, δO^{18} isotopic relations in Hercynian plutonic rocks, enclaves, augen gneisses, sedimentary origin, hybrid character, 88M/0707; Central Volcanic Region, primary, differentiated magmas, 88M/6171; Cuenco del Duero, Micocene transitional marsh to lacustrine envt., min., geochem., palaeontol. study, 88M/6327; Galicia, Andosols developed from non-volcanic materials, 88M/3423; goethite from diverse envts., characterization, 88M/6058; granite, Rb/Sr dating, 88M/3213; weathering of serpentinite, 88M/5031; Macizo de Cabo Ortegal, shoshonitic rocks. petrol., 88M/6235; Sisargas, orthogneiss, U-Pb dating, new evidence of Precambrian basement, 88M/1605; N. Galicia and E. Asturias, granitic rocks, classification, 88M/6170; passive continental margin off Galicia, plagioclase-bearing peridotites, lithol., struct., 88M/6284; Grupo Cantabria Pb-Zn deposit, lithostratigr., min. data, 88M/3581; Guipúzcoa, Legorreta, Zn-Pb ore deposits, metallogenic study, 88M/1909; Huelva, Iberian Pyrite Belt, volcanosedimentary complex, O, H isotopes in, example of water circulation through, 88M/5628; La Coruña, soils on granite, detn. of mineralog. classes, 88M/0206; La Mancha, evaporite sedimentation in playa lakes, 88M/2972; Madrid, Roman marble sculptures, petrog., 88M/6117; Vicálvaro, sepiolite from Tertiary beds, chem, anal.. 88M/0166; Málaga, Cr-Ni ores in ultrabasic massifs, characterization, 88M/1879; Montseny Massif, powellite, occurrence, chem. anal., 88M/4303; Morille-Martinamor, plutonic, metamorphic rocks, Rb/Sr dating, 88M/3214; Nevarra, Eugui, magnesite deposits, ore genesis, 88M/0398; Piornedo, colloidal fractions of soils on granite, props., classification, mineralogy, 88M/0205; Pontevedra, metallic compounds in gneiss, mineralogy, compn., 88M/0617; Ronda, origins of mafic, ultramafic rocks in peridotite, 88M/4474; Salamanca, tin deposits, alluvial prospecting, 88M/0904; Golpejas, cassiterite placer deposits, anomalies in, 88M/5193; Montejo, Sn-Au deposit, geochem., min. characteristics, 88M/5582; Saucelle, Sn-W deposits, paragenesis, alteration, 88M/5195; Salamanca, Villamayor Sandstone, microporosity study, 88M/1735; Santander, Picos de Europa, sphalerite, occurrence, 88M/6472; Santiago unit, metamorhphic evolution, 88M/6394; Segovia, Honrubia, tectonic microstructs., 88M/6116; Sierra de Cartagena, Fe-Pb-Zn ore, min., textural, geochem study, 88M/1910; oxidation zones from greenalitemagnetite-sulphide-carbonate paragenesis, 88M/3531; oxidation zones of Fe-Pb-Zn ore deposits, 88M/3532; San Valentin mine, ecandrewsite, new min., zinc analogue of ilmenite, 88M/4338; Sierra de Gata, calc-alkaline volcanic rocks, K/Ar ages, geol. setting, 88M/1606; Sierra de Gredos, lamprophyres, petrogr., geochem., differentiation models, 88M/1240; Sierra del Guadarrama, baryte, fluorite, assoc. with sulphides, fluid inclusion study, 88M/6069; muscovite polytypes, 88M/6026; orthogneiss, geochronol. study, 88M/1607; dykes, geol., 88M/1242; porphyry relationship between baryte, fluorite, 88M/5194; Sierra del Guadarrama, Monica mine, mineralization, textural, min. study, 88M/5248; Soria, Agreda, archaeological pottery, study of, 88M/6485; Subbetic Cordillera, Triassic ophites, Jurassic basalts, mica schist xenoliths in, 88M/6118; Tajo Basin, siliceous rocks, use of term 'silcrete', 88M/2973; Tarragona, Priorat, mins. of, 88M/4822; Tremp-Graus Basin, Roda Sandstone, early diagenetic alteration of shallow-marine mixed sandstone, Eocene, 88M/6326; Trujillo, W deposits, anals., 88M/1877

ry, CANARY ISLANDS, dyke swarm, implications for formation of oceanic islands by extensional fissural volcanism, 88M/6290; Tejeda Volcano, Mogan and Fataga formations, pyroclastic flows, lavas, min. chem., intensive parameters, magma chamber evolution, 88M/1300; Tenerife, crystallization of nepheline syenite in subvolcanic magma system, 88M/2841; volcanic eruptions, history, petrol., geochem., 88M/6236

Spectrometry, atomic absorption, fly ash anal., 88M/1684; atomic absorption, IL 440 atomic-vapour accessory for detn. of gaseous hydride-forming elems. by, 88M/1679; 'effects of acid type, concentration on detn. of 34 elems. by simultaneous ICP AES, 88M/4948; interfacing of microcomputer with simultaneous atomic-emission spectrometer, 88M/4947

Specularite mineralization, *Turkey*, *Kizildağ–Elaziğ*, features, origin, 88M/3589 Speleothems, incorpn. of Al, Mg, water in opal-A, evidence from, 88M/3479

Spencerite, Zambia, Kabwe, IR spectroscopy, 88M/2651

Sperrylite, new type of Pt mineralization, 88M/0285

Spessartine v. garnet

Sphalerite, chalcopyrite disease in, pathology, epidemiology, 88M/1048; coexisting with stannoidite, in tin ore, mineralogy, texture, physicochem. envt. of formation, 88M/0619; Fe-Zn exchange reaction between tetrahedrite and sphalerite in natural envts., 88M/1049; hydrothermal, deformation of crystals, 88M/6064; in contact aureole of andesite 88M/6364; mechanism of rimming of chalcopyrite around, during retrograde metamorphism, 88M/2627; minor elem. compns. of, as petrogenetic indicators, 88M/5566; solubility in 1-5 m NaCl solutions to 300°C, 88M/5428; tr. elems. in, geochem. significance in distinguishing genetic types of Pb-Zn ore deposits, 88M/0618; Belgium, from lead-zinc deposits, S isotopic geochem., 88M/3854; Bulgaria, Madan ore region, Erma-reka sector, gas-liquid inclusions in, 88M/0294; Canada, Northwest Territories, Portman Lake, occurrence, 88M/2591; Greece, E. Peloponnesos, Ermioni Cu-bearing pyrite mines, metallogeny in basic rocks of palaeosubduction area,, 88M/1914; Korea, from hydrothermal metallic ore deposits, 88M/1050: compositional variation, Scotland, Argyllshire, Kilmelford, in Cu-bearing intrusive suite, 88M/3570; Spain, Santander, Picos de Europa, occurrence, 88M/6472

— troilite cosmobarometer, refinement of, 88M/5423

Sphene v. titanite

Spilitic rocks, USSR, Greater Caucasus, origin, 88M/2234

Spinel, aluminous, in lamproites, occurrence, significance, 88M/1027; and sapphirine phase relationships in system FeO-MgO-Al₂O₃-SiO₂-TiO₂-O₂ in presence of quartz, hypersthene, 88M/5386; cation-deficient Fe₂TiO₄ and FeCr₂O₄, ⁵⁷Fe Mössbauer spectroscopy, 88M/5138; ⁵⁷Fe Mössbauer spectroscopy, magnetization of cation deficient Fe₂TiO₄, FeCr₂O₄, magnetization data, 88M/6443; Mg₂GeO₄ olivine-spinel phase transition, 88M/0545; microstruct. evolution during transformation of Mg₂GeO₄ olivine to. 88M/2060; $(Ni,Mg)_{4n+6}Ge_{2n+1}O_{8(n+1)}$, new structl. family related to, 88M/5071; orientated lath-like inclusions of new type in, 88M/5507; phase formation during 980°C exothermic reaction in kaolinite-to-mullite reaction series, 88M/3703; phases revealed

in Incoloy 800 tubes exposed to water under oxidizing condns., 88M/3684; ternary-, volumes in system MgAl₂O₄–Fe₃O₄–γFe_{8/3}O₄, implications for effect of *P* on intrinsic fO₂ measurements of mantle-xenolith spinels, 88M/0524; thermochem. data, evaluation, 88M/1991; *Germany, Rhenish Massif*, detrital, from alpinotype source rocks in Middle Devonian sediments, 88M/4299; *Pakistan, Hunza valley*, blue, gemstone, 88M/2102; *Sri Lanka*, bluish violet, gemstone, 88M/0584

-, chrome, accessory, from Lower Cambrian basalts, 88M/1030; Algeria, Western Laouni mafic intrusion, Na- Ti- Zr- H2O-rich min. indicating inclusions post-cumulus Cr-spinel dissolution, recrystallization, 88M/6051, pseudobrookite inclusions in, 88M/1021; Austria, Tyrol, Oetztal-Stubai complex, occurrences in metacarbonates, 88M/4300; USSR, Magnitogorsky synclinorium, accessory, in basalts, problems of petrol., 88M/4298; Voronezh crystalline massif, from sulphide Cu-Ni, Ni-Co ores, typomorphism, 88M/4297

—, chromite, in Yamato (B) achondrite, crystallographic, chem. studies, 88M/0941; Austria, Tyrol, Oetztal-Stubai complex, occurrences in metacarbonates, 88M/4300; Poland, Lower Silesia, significance of chromite chem. to petrogenesis of ultrabasites, 88M/2839; Turkey, Kefdağ and Soridağ, generation of chromite bodies, new approach, 88M/3588; USA, Alabama, occurrences, 88M/0362; Maryland, Sykesville dist., Zn-rich, compositional zoning in, 88M/1029

—, — deposits, ophiolites assoc. with, petrogr., structl. classification, 88M/0288; N Oman ophiolite, mineralogical constraints, 88M/0345; Tibet, Luobosa, podiform, genesis, 88M/1028

—, — materials, Pt-group metal detn. in, use of Li tetraborate in fire-assay procedure with Ni sulphide as collector, 88M/1678

—, — mineralization, *Turkey, Pozanti-Karsanti*, stratiform, within ophiolite complex, 88M/3591

—, — resources, *Papua New Guinea*, geol., 88M/5206

—, ferromagnesian, disordering effects in mantle mins., 88M/3718

--, gahnite, Canada, Northwest Territories, Portman Lake, occurrence, 88M/2591

—, jacobsite, and hausmannite from natural assemblages, genetic reinterpn. of crystallographic intergrowths of, 88M/4296; *India, Sausar group*, bearing assemblages, petrol., 88M/6053

—, maghemite, tr. elem.-substituted, transformation to hematite, 88M/5418; Western Australia, Darling Range, and corundum, in laterites, 88M/3424

—, titanomaghemite, crystal struct., chem., 88M/5137; synthetic, characteristic phys. props., 88M/1532; inversion of, 88M/1533; —, magnetite, activities across MgAl₂O₄–Fe₃O₄ spinel join, application to thermobarometric estimates of upper mantle O fugacity, 88M/5417; biogenic, as primary remanence carried in limestone deposits, 88M/1541; crystals (1 µm to 1 mm), hydrothermal growth, 88M/5416; exptl. study of chem. and crystallization RM in, 88M/1524; Fe-Mg titaniferous, thermodynamic props., 88M/3755; heterogeneous, epitaxial nucleation of protein crystals on min. surfaces, 88M/6031; hydrothermally recrystallized, magnetic props., 88M/1521; in contact aureole of andesite stock, 88M/6364; lodestone, faceted, gemstone, 88M/0587; natural, crystal struct., cation distribn., 88M/3491; radioisotope study of traces of Au in, 88M/0532; single-domain and superparamagnetic, synthesis of, in soils, 88M/3753; solubility of, in hot aqueous solutions, thermodynamic anal., 88M/3752; T dependence of exchange constant in, 88M/6442; T dependence of hysteresis in, 88M/1528; two types of chem. RM during oxidation of, 88M/1523; Cyprus, Troodos, secondary, characteristics, significance of, in profile through dyke component of ophiolite, 88M/4295; USA, Alaska, Goodnews Bay dist., Pt-group elems. in, 88M/0359; USSR, Siberia, from 'ferri-ore complex' and carbonatites, struct., genesis, 88M/4294

- —, grains, South Africa, Bushveld complex, postcumulus modification of in upper zone, 88M/2615
- —, layers, South Africa, Bushveld complex, tr. elem. diffusion during bottom crystallization of double-diffusive convection systems, 88M/4495
- —, ores, V-bearing titaniferous, structs., textures, interpn., 88M/6054
- —, placer deposits, prelim. magnetic investigations, 88M/0382
- —, —, titanomagnetite, and coexisting ferrian ilmenite, Mg/Mn partitioning as test for equilibrium between, 88M/6052; aqueous maghemitization of, 88M/3754; domain observations during hysteresis at elevated T and thermal cycling, 88M/1529; -ferrian ilmenite grains, composite, and correlative magnetic components in dacite with self-reversed TRM, 88M/3128; fine particle, precipitated in silicate matrix, magnetic hysteresis props., 88M/1526; from ocean floor, observation of shrinkage cracks in, 88M/1534; Mössbauer spectra, reappraisal. 88M/3492; preparation of dispersed particles by glass-ceramic 88M/1539; Ti-rich, stress anisotropy in, 88M/1537; Norwegian Sea, diagenesis of titaniferous mins. in Jurassic sandstones, 88M/6313
- —, MgAl₂O₄, precision XRD data on struct., 88M/1820
- —, γ-Mg₂SiO₄, and β-Mg₂SiO₄ (modified spinel), Raman spectra, 88M/0242
- —, zincian, South Africa, Namaqualand, Aggeneys, assoc. with Cu-Pb-Zn-Ag deposits, chem., origin of, 88M/4293; Zn(Al,Cr)₂O₄, thermodynamic props. at high *T*, *P*, 88M/5415
- Spinellids, accessory Cr-, of komatiites, chem. compn., problem of genesis, 88M/2614
- SPITSBERGEN, NE, contrasting late Precambrian carbonates, petrol., isotopic implications, 88M/4008; NW,

garnet-cordierite-sillimanite gneiss, metamorphic evolution, 88M/3035

Spodumene v. pyroxene

SRI LANKA, anal. studies of stream sediments, for identification of gold-bearing areas, delineation of ultramafic bodies, 88M/0913; arrested charnockite formation, 88M/1492; bluish violet spinel, gemstone, 88M/0584; cat's-eye zircons, study, 88M/5499; gem-bearing sediments, geol., mineralogy, 88M/2103; graphite deposits, consequence of granulite metamorphism, 88M/0399; K availability of common rocks, for fertilizer, 88M/1934; kunzite, gem notes, 88M/5518; REE in residual, alluvial, inter-tidal sediments, 88M/2315; thermal, baric evolution of garnet granulites, 88M/6413; tr. elems. in vein graphite, 88M/5561; NW, chem. origin for basal ferruginous gravels, implications for iron ore genesis, 88M/5719; Embilipitya area, orthopyroxene, occurrence, min. data, 88M/2556; Pattara, chrysoberyl-bearing pegmatite, 88M/2104

Stalactites, West Indies, Grand Cayman Is., biogenic structs., micrite in, 88M/3008

Stalagmites, France, Pyrenees, Gouffre de la Pierre-Saint-Martin, high U content in, 88M/4020

Stannite group minerals, investigations, 88M/2628; kesterite, investigations, 88M/2628

Stannoidite, in tin ore, mineralogy, texture, physicochem. envt. of formation, 88M/0619

Stannomicrolite v. microlite

Statistical techniques, anal. of evaluation error made using, 88M/1857

Staurolite, China, Jiangsu province, Donghai dist., Mg-rich, in garnet-corundum rocks, eclogite, 88M/6005; France, Vendee, Yeu Is., mapping, discovery of hyperaluminous septa of, in gneiss, 88M/1470; USA, Georgia, Blue Ridge, in amphibolite, 88M/4757

Steacyite, Republic of Guinea, Los Is., Rouma Is., occurrence, anals., 88M/1003

Steenstrupine, reconnaissance studies on synthesis, stability, 88M/2089

Steigerite, USSR, Kazakhstan, Karatau, from carbonaceous-siliceous V-bearing formations, 88M/1038

Stellerite v. zeolite

Steranes v. hydrocarbons

Sternbergite, crystal struct., 88M/1825; England, Cumbria, Garrigill, Tynebottom Mine, in Ag-Ni-Co min. assocn., 88M/1051

Steroids, early-stage diagenesis of, 88M/2412; E. tropical N. Pacific, geochem. in O minimum zone, 88M/4148

Stibiomicrolite v. microlite

Stibnite, evolution of bismuthian, stibian mineralization in cassiterite-silicate-sulphide metallization, 88M/4313

Stilbite v. zeolite

Stishovite, calculation of elasticity, high *P* instabilities in, with potential induced breathing model, 88M/4769; superheating, melting, vitrification through decompression of high-*P* mins., 88M/3707

Stokesite, Brazil, Minas Gerais, Urucum pegmatite, occurrence, 88M/2618

Strashimirite, parageneses of, 88M/1039
Strontianite, aragonite—strontianite solid solutions, thermodynamics, results from stoichiometric solubility at 25 and 76°C, 88M/0541; neutron diffraction study, 88M/5158; England, Yorkshire, Pennines, occurrence, 88M/4803; USA, Illinois, occurrence, fluorescence of, 88M/6480

Strontium, cation-exchange column calibration by EDTA titration, 88M/0077

- deposits, Canada, geol., 88M/1945 Structural geology, bridge structs, as sense of displacement criteria in brittle fault zones, 88M/2719; bulk kinematics from shear zone patterns, field examples, 88M/2721; computer-constructed block diagrams of folded, thrust-faulted strata, 88M/0061; computer models of P shadows, method for strain measurement, shear-sense detn., 88M/2724; criteria for sense of movement on fault surfaces in brittle rocks, 88M/2718; deformation, fluid-rock interaction in dilatant shear bands. metasomatic 88M/1158: deformation/metamorphism relationships, exptl. study, 88M/1985; displacement efficiency of faults, fractures, 88M/1105; energy balance for large thrust sheets, fault-bend folds, 88M/1106; example of 3-D anal. of thrust-related tectonites, 88M/2722; extrusion, radial spreading beyond closing channel, 88M/1107; geol., industrial implications of extensive dilatancy anisotropy, 88M/1109; mechanical energy budget of fold-and-thrust belt, 88M/4794; microstruct., c-axis pattern, microstrain, kinematics of S-C mylonites in Grenville gneiss, 88M/1179; microstructl. shear criteria assoc. with grain-boundary sliding during ductile deformation. 88M/6101; newly recognized type of slickenside striation, 88M/2716; orientation files: creation, modification, storage using BBC microcomputer, 88M/0062; practical section drawing through folded layers using sequentially rotated cubic interpolators, 88M/1104; precautionary note on shear bands as kinematic indicators, 88M/2723; progressive development of structs. in ductile shear zone, 88M/1171; rolling structs. at large shear strain, 88M/2726; shear criteria and structl. symmetry, 88M/2710; shear criteria in rocks, review, 88M/2709; shear-sense detn. on striated faults from e twin lamellae in calcite, 88M/2717; shear-zone geometries in experimentally deformed clays, influence of water content, strain rate, primary fabric, 88M/6102; solution-deposition processes, mass transfer in deformation of minor fold. 88M/1478; stable positions of rigid objects in non-coaxial flow, study in vorticity anal., 88M/2725; structl./stratigraphic models for extensional basins of half-graben type, 88M/1108; thrust sequences, models, 88M/6100; use of digitizing tablet to automate R/ϕ calculations, 88M/0054; Pilbara Block. Archaean strike-slip faulting, related ensialic basins, 88M/2698; Western Australia, Irregully fm., use of veins to establish cover fold history, 88M/1173; Belgium, between Channel and Meuse River, Variscan front and Midi fault, new cross-section, struct., 88M/1156; Canada, NE of Newfoundland, deep crustal struct., evolution of rifted margin, LITHOPROBE results, 88M/2699; Ontario, Grenville Province, shear criteria, 88M/2711; China, Panxi rift and adjacent area, evolution of tectonic stress field with ref. to superimposition faulting, 88M/6125; E Alps, superposed deformations, strain anal., microfabrics, 88M/1159; France, Massif Central, Beauvoir granite, cut effect in petrofabric diagrams, application, 88M/1157; E Greenland, relay structs. in Permian Lower basement-involved system, 88M/6104; India, extension Garhwal Himalaya, kinematics of transverse lineaments, regional tectonics, Holocene stress field, 88M/2694; Uttar Pradesh, Garhwal Himalaya, Main Central Thrust, tectonics, 88M/4402; Indonesia, South Sulawesi, mesoscopic structs. produced by Plio-Pleistocene wrench faulting, 88M/2714; Japan, Permian/early Triassic orogeny, piling up of nappes, transverse lineation, continental subduction of Honshu block, 88M/2696; Japan, Kyushu, Shimanto Belt accretionary complex, structl. evolution, 88M/4403; New Zealand plate-boundary zone, last million years of deformation, 88M/4406; S Alps, River headwaters, folding, Callery deformation, vein mineralization, 88M/4749; Scotland, Assynt, Stack of Glencoul, Moine thrust zone, heterogeneous deformation, quartz crystallographic fabric transitions, 88M/4702; Turkey, Antalya, shear structs. in anhydrite at base of thrust sheets, 88M/2713; USA, California, Punchbowl fault, composite planar fabric of gouge, 88M/2720; NE Basin and Range, kinematics of compressional extensional ductile shearing deformation in metamorphic core complex, 88M/2712; San Andreas, fault system, new evidence on state of stress, 88M/4791; Virginia, Conococheague fm., relationships of rock cleavage fabrics to incremental and accumulated strain, 88M/1181; Wales, Builth inlier, kinematics of strike-slip faulting, 88M/1139; Dyfed, Llandovery Series, type area, 88M/1155; Llangranog lineament, Caledonian transpression zone, 88M/1153; Snowdonia, Tremadoc 'thrust' reinterpreted, struct. features 88M/1150; Welsh Basin, Bala lineament, tectonic evolution, 88M/1151; central Wales synclinorium, struct., deformation history, evidence for long-lived basement struct., 88M/1154; S-central Wales, geol. succession, struct., 88M/1152

Strunzite group, ferristrunzite, Belgium, Blaton, new member of, 88M/2659

SUDAN, NW, Triassic and Tertiary volcanic rocks, petrol., geochem., age relations, 88M/1309; Butana region, sources of recharge to basal Nubian sandstone aquifer, 88M/5858; Sabaloka, Pan-African continental margin, evidence from geochronol. study of granulites, 88M/4889

Sugilite, South Africa, Kalahari Desert, Wessels mine, occurrence, gemological props., 88M/2101

Sulphate, and nitrate in precipitation, relationships between concentration, deposition of, 88M/0401; and sulphide, S isotope fractionation factors between, in high T melts, exptl. study, 88M/1999; contamination in groundwater from carbonate-hosted mine, 88M/5342; trace, contents and S isotope compn. in various rock types, 88M/1976

deposits, Poland, Puck Bay region,
 Zechstein, min., geochem. anal., 88M/4025

— minerals, in evaporitic basin, genesis, distribn. of, 88M/4646; microbiol. formation of, 88M/2140; Canada, Columbia Icefields, Castleguard Cave, origin, 88M/3999; Greece, Peloponnesus, Katakolo area, from mud volcano, chem. anals., geochem. behaviour, 88M/1057; Italy, Tuscany, Cetine mine, rare, 88M/1099

 molecules, molecular orbital study of bonding in, implications for sulphate crystal structs., 88M/5157

- reduction, in deep coastal marine sediments, 88M/2329

-- sulphur system, chem., isotopic equilibrium at 300°C, geochem. consequences, 88M/0838

Sulphide, and sulphate, S isotope fractionation factors between, in high T melts, exptl. study, 88M/1999; contents and S isotope compn. in various rock types, 88M/1976; sedimentary, in nearshore sediments, 88M/4051; Canada, Niagara Escarpment, Pb isotope ratios in rocks and galenas, implications for primary, secondary

sulphide deposition, 88M/2330

- deposits, Australia, New South Wales, Woodlawn, Zn-Pb-Cu, ore formation, interpn. from field observations, metal 88M/0385; zoning, Sunny Corner, genesis, Ag-Pb-Zn-Cu, geol., ore 88M/5596; China, types, metallogenic models, 88M/3552; France, Massif Central, 'Les Malines' mine, sulphide-bearing intrakarstic sediment, 88M/3578; Germany, Bodenmais, petrographic, geochem. studies on country rock, 88M/3534; Greece, Peloponnesus, Argolis Peninsula, Mesozoic, ocean ridge origin, 88M/1883; setting, Ivrea-Verbano, Pt-group and related mins. from, 88M/2629; Pacific, Atlantic, review, 88M/5235; Peru, Tambo Grande, history of discovery, 88M/3601; Scotland, Gairloch, Loch Maree group, stratiform, Proterozoic, 88M/1874; South Africa, Northwest Cape, Boksputs, strata-bound Cu-Fe, Proterozoic front arc setting, poss. Besshi-type deposit, 88M/0374; Sweden, Bergslagen, Saxå rift basin, formation of, relation to sodic, potassic alteration of Proterozoic metabasites, 88M/0338; USA, Montana, Stillwater complex, Cu, Ni, resource assessment, 88M/0388; UUSR, N. Caucasus, Mn distribn. in ores, primary aureoles of, 88M/2161
- —, massive, expts. on convection, relevance to genesis of, 88M/2011;

volcanic-hosted, use of F as pathfinder for, 88M/2505; E. African Rift system, of hydrothermal origin, 88M/3545; Australia, New South Wales, Woodlawn and Captains Flat, regional geol. setting, 88M/5220; Queensland, Thalanga, min. data, 88M/5272; Western Australia, Teutonic Bore, geol., 88M/5284; Canada, Manitoba, Flin Flon-Snow Lake belt, P, T condns. of metamorphism, 88M/4755; Flin-Snow Lake belt, metamorphosed, O isotope geochem., 88M/0659; Namibia, Matchless, Cu deposit, descriptn., 88M/0369; Pacific, Juan de Fuca Ridge, classical chem, anal, of forms of bound S in, application to chimney samples, 88M/2498; multielem. analytical techniques applied to, 88M/2497; Sweden, Skellefte dist., Boliden-Långdal area, and early Proterozoic volcanism, hydrothermal activity, 88M/0626; USA, Alaska, Pb-isotope signatures, significance to min. exploration, 88M/2490; Arizona, Jerome, Early Proterozoic, geochem. of footwall alteration assoc. with, 88M/0669; Zimbabwe, Harare greenstone belt, Selby prospect, in Archaean black shales, integrated geol., geochem., geophys. surveys, 88M/0909

— —, polymetallic, sea-floor, Au in, 88M/0300; USSR, Rudnyy Altay, Zyryanov, geochem. features of mineralizing solutions, 88M/5253

- —, volcanogenic, massive, role of immiscible magmatic sulphides in generation of, 88M/1847; Australia, Queensland, Mt. Morgan mine, Mt. Chalmers mine and UNMC prospect, massive, penecontemporaneous faulting and, 88M/5214; Tasmania, Que River, polymetallic, REE mobility around, 88M/5598; Rosebery and Mt. Lyell, chem. remobilization, 88M/1851; Papua New Guinea, W. Woodlark basin, massive, potential analogue setting for, 88M/5265
- materials, field detn. of Cu, Mn, Zn in, by flameless AAS, 88M/4181

 melt inclusions, primary, in mantle-derived megacrysts and pyroxenites, 88M/2808

- mineralization, massive, volcanogenic, chlorite IR spectral data as proximity indicators of, 88M/5558; Western Australia, Golden Grove, volcanogenic massive, volcanic-sedimentary facies assocns. hosting, 88M/5278; Chile, Jardin, Cu-Ag, assoc. with rhyolitic volcanic rocks, 88M/0394; Ireland, Navan Zn-Pb deposit, carbonate, silicate precursors, 88M/1905; Italy, Sardinia, related to Tertiay volcanism, prospecting for, 88M/2463; Pacific Ocean, Galapagos Rift, Cocos/Nazca plate boundary, massive, ore paragenesis of recent hydrothermal deposits, 88M/3561
- minerals, flow mechanisms in, 88M/1850;
 from kimberlites, and Cu-Ni mineralization, 88M/2166;
 microbiol. formation of, 88M/2140;
 ore microscopy, image anal., overview, 88M/3256;
 spectrophotometric detn. of Bi in, 88M/4937;
 Chile, El Teniente and Rio Blanco porphyry Cu deposits, O, S isotopic compns., 88M/2142;
 Italy, Latium, Tolfa Mts., and host rocks from

hydrothermal mineralization, abundance, significance of Cu. Mn. Zn in, 88M/2154

ores, ancient, modern, similarities, differences, 88M/3513; magmatic, PGE behaviour during fractional crystallization. partial melting, special ref. to compn. of, 88M/3859; stratabound, Caledonian, factors affecting them. 88M/0339; Australia, Oueensland, Mt. Chalmers, volcanogenic, alteration assoc. with, 88M/2588; E. Pacific Rise (12° 50'N), compn. of, 88M/5600; Kamchatka. subsurface USSR. generation, models for, 88M/5186

- -fluorite ore deposit, Bulgaria, Central Rhodopes. Jugovo, min.-thermometric investigations for, 88M/1916

-selenide-metal allov association, Oueensland. North Australia. Arm epithermal precious-metal prospect. 88M/3598

Sulphides, Cu-Fe-Bi-Pb-Sn-, stabilization of, 88M/0448; from sedimentary diagenetic formations, new data, 88M/0638; H2S, approximation of second dissociation constant for, 88M/5354; radioisotope study of traces of Au in, 88M/0532; study of chem. state of Au in, Mössbauer spectroscopy, 88M/0614; study of phase transformations with high-T ore microscope, 88M/0531; T dependences of S isotope fractionation factors between, 88M/2000; Mid-Atlantic Ridge, supergene, Au, native Cu in, 88M/5569

Sulphosalt group, new min. varieties in, 88M/4319

Sulphosalts, building principles, classification based on SnS archetype, 88M/3499; cyclically twinned structs, and approximate analogues, 88M/3503; mutual Pb²⁺/Sn²⁺ substitution in, 88M/1055; (Sb,Bi,Pb) ordering in, crystal struct. refinement of Bi-rich izoklakeite, 88M/0276; USSR, E. Transbaikalia, Srednegolgotaiskoe deposit, Sb-Bi, occurrence, 88M/1062

Sulphur, in coal, oil tar pitches, bituminous compounds, XRF anal., 88M/3316; in peat and coal, 88M/2404; method to examine S distribus, in processing of combustible shales from single specimen, 88M/0079; models for C, S cycles, atmospheric O, application to Palaeozoic geol. history, 88M/2284; orthorhombic, α -S₈, struct. refinement, 88M/5130; S isotope fractionation factors between sulphate, sulphide, in high T melts, exptl. study, 88M/1999; separation, recovery of S species in sedimentary rocks for stable S isotopic detn., 88M/5738; Canada, biogenic, and acidity of rainfall in remote areas, 88M/1963; USA, Delaware, sedimentary, in salt marsh, temporal variations of, 88M/5739; Zimbabwe, Dickenson gold mine, S sources in, as suggested by S isotopes, 88M/0322

- compounds, S dioxide, annual contribn, to atmosphere by volcanoes, 88M/2883; S dioxide, variation of SO₂ emission from volcanoes, 88M/2884; Gulf of Mexico. aromatic, distribn. in sediments, 88M/2455; USA, Rozel Point Oil, organic, in oils, sediment extracts, occurrence, identification of. 88M/2450

cycles. Canada. Superior Province, Archaean, evidence from sulphate mins., isotopically fractionated sulphides. 88M/3994

- deposits, Chile, Andes, Salar de Gorbea, and hydrothermal alteration zones in Cainozoic volcanoes, 88M/5244; Poland. Tarnobrzeg, native, origin, petrogr. studies, 88M/1940

- isotopes, compn. of tr. sulphate, sulphide, in various rock types, 88M/1976; detn. of $^{33}S/^{32}S$, $^{34}S/^{32}S$, $^{36}S/^{32}S$ by ^{36}S method, 88M/5938; Pacific Rim, in mins., 88M/5603

resources, USA, Wyoming, 88M/1941

Svanbergite, in hydrothermal ore deposits, products of apatite destruction during advanced argillic alteration, 88M/1060

SWAZILAND, multiple zircon growth within early Archaean tonalitic gneiss, 88M/3225

SWEDEN, biogeochem, studies of plants from stream banks, 88M/2460; crustal struct. along northern 'FENNOLORA' profile, 88M/2674; depositional evolution of Svecofennian supracrustal sequence. 88M/2680; detrital feldspars in Proterozoic sandstones. SEM study of dissolution textures, 88M/6040; precipitation and runoff, ten yr. O isotope study, 88M/5879; research programme on radioactive waste disposal, isotope geochem. 88M/1967; S- and I-type granitic rocks, lithophile elem. distribn., 88M/3921; central, æolian sediments, TL dating, 88M/3200; N. implications of new U/Pb dating U/Pb zircon chronol. for early Proterozoic crustal accretion, 88M/4875; Proterozoic geochronol., 88M/2685; N. W. border of Archaean province of Baltic Shield, U/Pb dating, 88M/0005; Arvika and Graestorp, migmatites, results of almost isochem. partial melting, 88M/4699; Bergslagen, S isotope data of Proterozoic molybdenites, 88M/3856; Saxå rift basin, formation of sulphide deposits, relation to sodic, potassic alteration of Proterozoic metabasites, 88M/0338; W Bergslagen, Gåsborn area, cordierite, sekaninaite gedrite in hydrothermal vein, 88M/4257; SW Bergslagen, rift-related igneous activity. metallogenesis, 88M/2682; Bothnian Bay, As regeneration from estuarine sediments, 88M/5315; Nd isotope data on 1900-1200 m.y. old basic rocks, metasediments. 88M/2683; Eskilstuna, map-sheets, geol., interpn. of aeromagnetic maps, 88M/4376; Göteborg region, granitic plutons, Rb/Sr, U/Pb isotope studies, 88M/3201; Grums, granitic rocks in banded sequence, U/Pb dating, 88M/3202; Harmsarvet ore deposit. fluid evolution, 88M/3886; Jörn, early Proterozoic intrusive complex in volcanicarc envt., 88M/1135; Långban, filipstadite. new derivative of spinel, 88M/6090; ingersonite, new Ca-Mn antimonate related to pyrochlore, 88M/6092; min. bibliography, 88M/4800; Sb-rich pinakiolite, new structl. variety, 88M/6068; Norberg ore dist., Häste field, akatoreite, ganophyllite paragenesis in manganiferous rocks,

Nordmark. armangite 88M/2573: occurrence, 88M/4323; blatterite, news. Sb-bearing Mn²⁺–Mn³⁺ member on pinakiolite group, 88M/4337; Norrland early Svecofennian stratigr., poss. existence of Archaean basement W. of Svecokarelides, 88M/3040; Sandudden, W deposit, epigenetic model, 88M/3569; Siljar granite, clouded-untwinned albite in 88M/1010; Skellefte dist., Boliden-Långda area, early Proterozoic volcanism hydrothermal activity, massive sulphide deposits, 88M/0626; Stripa Project palaeohydrol. inferences from fracture calcite anals.. 88M/1968: Svecofennian orogenic terrains, origin of continental crust of 1900-1700 m.y. age, Nd isotopes 88M/2684: Svecokarelian volcanic belt lateral variations in supracrustal geol. 88M/2681; Tallberg porphyry Cu deposit prelim. report, 88M/3568; Värmland reddish granitic rocks, isotopic datings 88M/4878: Västanå-Järkvissle. Sn-Li occurrence found by regional grid sampling of heavy-min. till concentrates, 88M/0886;; Västra Gråshöjden, Proterozoic high silica W-Mo, geochem., 88M/3920; Vettasjärvii granite, crustal reactivation, 88M/2816

SWITZERLAND, hydrothermal alteration of Variscan granite, magmatic autometasomatism, fault related vein metasomatism, 88M/3808; mins. of crichtonite group, new findings, 88M/2617; transport of envtl. radionuclides in alpine watershed, 88M/1958; N, deep groundwaters, envtl. isotope study, 88M/5873; isotopic investigations of water-rock system in deep crystalline rock, 88M/3831; occurrence of saline groundwaters and gases in crystalline rocks, 88M/3830; Aar massif, Susten-Pass area, gneiss, K/Ar, Rb/Sr dating, Hercynian min. paragenesis, overprint by Alpine metamorphism, deformation, 88M/1608; central Aar massif, Upper Oberhasli valley, metamorphic events, 88M/3073; Alps, metamorphic control of magnetic mineralogy of black shales, toward use of 'magnetic isogrades', 88M/3140; central Alps, meta-lamprophyre, geochem., 88M/2349; E Alps, Lower Engadine window, Idalp ophiolite, petrol., geochem., 88M/2937; W Alps, tectonic implications of high-P metamorphism, 88M/6396; Austroalpine Schneeberg-complex and ötztal crystalline basement. Eoalpine metamorphism, summary, 88M/3071; Baden springs area, noble gases as tracers identifying geothermal components in regions devoid of geothermal manifestations, 88M/5813; Berisal crystalline complex, metabasic, ultrabasic rocks, petrol., Alpine metamorphic evolution, 88M/3067; Campolungo, tremolite veins, genesis, 88M/3022; Centovalli-Locarno region, ferrogabbroic and basaltic meta-eclogites, petrol., 88M/3070; Greifensee, natural and fallout radionuclides as geochem. tracers of sedimentation, 88M/6328; Grisons, Vals. braunite and red phengite, occurrence 88M/2583; Helvetic Alps, reaction-isograd kaolinite + quartz = pyrophyllite + H_2O 88M/3021; Kanton St. Gallen. Weisstannental, U, Cu ore mins. in Lower lapilli-agglomerate 88M/1911; Lake Constance, excess K-Ar ages of glauconite from Upper Marine Molasse, evidence for glauconitization of mica, 88M/4273; Lepontine Alps, 'root zone', deformation under retrograde 88M/3063; Simano nappe, condns., wagnerite from metapelitic rock, min., geochem., 88M/2653; Nufenen Pass, Lepontine Alps, deformation, metamorphism, 88M/3062; Scuol-Tarasp, Engadine, mineral springs, isotopic geochem., 88M/5862; Simplon fault zone, atypical textures in quartz veins, 88M/4716; quartz textures, 88M/1160; Simplon massif, formation of nappes, 88M/3068; Sivretta nappe, eclogites, geochem. constraints on nature, geotectonic setting of protoliths, 88M/6398; Val Ferrata granite, geochem. anals., 88M/2212; Valais, zincocopiapite, occurrence, props., 88M/2639; Grand-Saint Bernard nappe, tectonometamorphic evolution of two basement complexes, 88M/3066; Valle Verzasca, Cima di metasomatic veins metaharzburgites, 88M/3809

Syenite, Canada, North West Territories, Dist. of Keewatin, Amer Lake map area, U/Pb 88M/1651; Canary Islands, Tenerife, nepheline, in subvolcanic magma system, crystallisation of, 88M/2841; Egypt, Abu Khruq complex, Sr, O isotopic record of hydrothermal alteration of, 88M/5636; India, Meghalaya, Maturigiri- Dhurakantagiri, quartz, U-Th-Mo mineralization in, 88M/1920; West Bengal, Shusina hill, foid-bearing, petrog., 88M/2695; Malawi, Chilwa province, Junguni intrusion, peralkaline nepheline, petrol., 88M/6182; Poland, Lower Silesia, Piława Górna, quartz, petrogr., origin, autometamorphism of, 88M/4478

- complexes, Greenland, Kangerdlugssuaq, Kærven, Tertiary, min. chem., geochem., 88M/6149; Philippines island arc, Cordon, undersaturated potassic igneous centre, 88M/1396

plutons, Canada, Quebec, Grenville Province, central metasedimentary belt, Precambrian, petrol., 88M/2870

porphyries, Czechoslovakia, Central Bohemian pluton, origin by magma mixing, 88M/6176

Sylvite, named after Franciscus Sylvius de la Boë (1614-1672), short biogr., 88M/4839 --- crystals, autoepitaxial growth of, 88M/2058

Synchysite, Y-, Germany, Harz Mts., Bad Grund Pb-Zn mine, in hydrothermal carbonate, 88M/2647

SYRIA, W, Homs basaltic area, petrol., 88M/4567; Golan Heights, origin of red clays interbedded with basalts, 88M/1762

Systems,

Ab-H2O-CO2, 88M/5479 Ag₂S-Cu₂S-Bi₂S₃, 88M/2044 Ag₂S-Cu₂S-PbS, 88M/2044 Ag₂S-PbS-Bi₂S₃, 88M/2045 Ag₂S-Sb₂S₃, 88M/3763 Ba₂SiO₄-Ca₂SiO₄, 88M/3725 Bi-Ni-S, 88M/0444

C-H-O, 88M/3839, 88M/5387 CaAl₂Si₂O₈-CO₂, 88M/5482 CaO-Al₂O₃-SiO₂, 88M/0467 CaO-CaF2-SiO2, 88M/5391 CaO-K2O-MgO-Al2O3-SiO2-H2O, 88M/3812 CaO-MnO-MgO-K2O Al2O3-SiO2-CO2-H2O, CaScAlSiO₆-CaAl₂SiO₆, 88M/5103 CaSO₄-H₂O, 88M/0535 CO2-N2, 88M/5349 Cu₂S-PbS-Bi₂S₃, 88M/2045 Fe-Mg-Si-C-O-H, 88M/0446 FeO-MgO-SiO₂, 88M/5450 FeSO₄-H₂SO₄-H₂O, mine drainage, acid, modelling chem. equilibria of, FeSO₄-H₂SO₄-H₂O system, 88M/2022 HfO2-TiO2, 88M/0522 H₂O-CaO-MgO-SiO₂, 88M/0556 H₂O-CH₄-NaCl-CO₂, 88M/5547 H₂O-CO₂-CaCO₃, 88M/5437 K₂O-Al₂O₃-SiO₂-H₂O, 88M/0557 KAISi3O8-CO2, 88M/5482 Li₂O-CaO-Al₂O₃-SiO₂, 88M/5468 Li₂O-SnO₂-SiO₂, 88M/0451 LiGaSiO₄-SiO₂, 88M/3732 M-O-H-S, 88M/5384 MgAl₂O₄-Fe₃O₄-γFe₃,O₄, 88M/0524 MgF₂-Al₂O₃, 88M/5405 MgF2-CaO, 88M/5405 MgF2-MgO, 88M/5405 MgO-SiO₂-H₂, 88M/5383 MgSiO₃-FeSiO₃, 88M/3719 Mg2SiO4-FeSiO4, 88M/3719 Mg₂Si₄O₁₂-Mg₃Al₂Si₃O₁₂, 88M/3726 MnSiO₃-CaSiO₃-MgSiO₃-FeSiO₃, 88M/2565 Na-Ca-Cl-SO₄-H₂O, 88M/5401 Na-Fe-Al-Si-O-F, 88M/3770 Na-K-Mg-Cl-SO₄-OH-H₂O, 88M/2023 NaAlSiO₄-CaMgSi₂O₆-SiO₂, 88M/5390 NaAlSiO₄-KAlSiO₄-SiO₂H₂O, 88M/0450 NaAlSi3O8-CO2, 88M/5482 NaAlSi₃O₈-H₂O-F₂O₋₁, 88M/0479 NaCl-H₂O, 88M/0500, 88M/2021 NaCl-KCl-CaCl2-H2O, 88M/5396 NaCl-KCl-H2O, 88M/0500, 88M/5540 Na₂O-Al₂O₃-SiO₂, 88M/3690 Na₂O-Al₂O₃-SiO₂-H₂, 88M/0447 Na₂O-FeO-Fe₂O₃-SiO₂, 88M/3689 Na₂O-ZrO₂-SiO₂, 88M/3728 Nd₂O₃-P₂O₅, 88M/0544 Ni-Cu-S-Ru, 88M/0443 NiO-MgO-SiO2, 88M/2061 SrO-Al₂O₃-H₂O, 88M/0527 Ta₂O₅-Al₂O₃, 88M/3751 TiO2-SnO2, 88M/5410 Zr-Fe-Ti-O, 88M/5411 diopside-anorthite, 88M/3651 forsterite-nepheline-silica, 88M/5392 zirconium hydroxide-fulvic acids-water, 88M/0492

Taaffeite, gem trade lab notes, 88M/5517 nephrite deposits, 88M/5509; Fengtien, nephrite deposits, stable isotope studies, 88M/5756; Heng-Chun, 'ferritchromit', from chromitite deposit, STEM study, 88M/5139; Tatun volcanic area, bauxitization, geochem., isotopic studies, 88M/5721

Talc, and calcite, quartz, exptl. equilibrium data for reactions between, at total gas P of 5000 bar, 88M/3700; and natural tremolite, phlogopite, F-OH substitution 88M/6021; exptl. pseudomorphism of diopside by, in (Ni,Mg)Cl2 aqueous solutions, 88M/3735; orbital interactions in, perturbations of idealized two-dimensional, infinite silicate frame, 88M/5109; shear strength as function of P, T, relative

humidity, 88M/0564; Italy, Western Alps, Monviso, retromorphic Fe-rich, in low-T eclogites, 88M/1474; Namibia, Damara orogen, and tremolite, reverse age relations, 88M/6410; USA, Alabama, Talladega County, 88M/0395; occurence, Pennsylvania, Lancaster County, Cedar Hill Quarry, assoc. with nakauriite, 88M/1061

deposits, Japan, Hitachi metamorphic terrain, 88M/1944; Nigeria, mineralogy, geochem. dispersion in tropical residual soils overlying, 88M/2466

Talmessite, parabrandtite, new min., Mn analogue of, 88M/1096

Tangeite, Italy, Genoa, Molinello mine, occurrence, 88M/3158

Tantalite, France, Beauvoir granite, chem. data, 88M/4305

Tantalum, S. Greenland, large occurrence, 88M/5246

systems, $Ta_2O_5-Al_2O_3$ formation, transformation of δ-Ta₂O₅ solid solution in, 88M/3751

TANZANIA, Au mineralization, review, 88M/0336; geomorphol. processes, related mineralization, 88M/0346; mafic dyke swarms interpreted from aeromagnetic data, 88M/6181; Nd, Sr systematics in eclogite xenolith, evidence for frozen min. equilibria in continental lithosphere, 88M/4892; Lelatema area, tanzanite gemstone deposits, geol., 88M/3084; Merelani vanadiferous zoisite, green grossular, fluid inclusions in, 88M/2547; Mpwapwa Dist., Mautia Hill, talc-kyanite-yoderite-quartz schist and assoc. rocks, petrol., 88M/1482; Oldoinyo Lengai volcano, disequilibria systematics, timescale of carbonatite magma formation, comment, 88M/4890, reply, 88M/4891; Pugu coastal area, Miocene kaolinitic sandstones, fluvio-deltaic envt., in situ pedogenesis, 88M/1421; Pugu Hill kaolin deposit, mineralogy, genesis, 88M/3411; Wami River, granulite complex, basic, ultrabasic rocks, geochem., 88M/4059

Tanzanite gemstone deposits, Tanzania, Lelatema area, geol., 88M/3084

Taramellite, titantaramellite, USA, California, Santa Cruz, Kalkar quarry, occurrence, 88M/3168

TASMAN SEA, Mn nodule occurrence, 88M/0357

Pb2+/Sn2+ Teallite-herzenbergite, mutual substitution in sulphosalts, 88M/1055

Teeth, fish, assessment of REE patterns, ¹⁴³Nd/¹⁴⁴Nd ratios in, 88M/2304

Tektite, North America, continental slope off New Jersey, microtektites and tektite fragments, chem. compn., 88M/5998

-, australite, Western Australia, Hampton Hill Station, occurrence, 88M/2537; Kimberley region, occurrence, 88M/2538

— glass, oxidation state of iron in, 88M/2536

-, moldavite, origin of, 88M/0963

Tellurantimony, Sb₂Te₃, hydrothermally synthesized, crystal struct., 88M/1826

Tellurides, of Au, Ag from black schists,

Tellurium, inorganic, detn. in natural waters, 88M/0083

Tellurobismuthinides. China. Pangushan, in W-Bi deposits, 88M/5261

Tellurobismutite, Bi₂Te₃, hydrothermally synthesized, crystal struct., 88M/1826

Tennahedrite, thermochem, metal zoning, 88M/3814

Tennantite, Bulgaria, Madan ore field, zincian, and zincian tetrahedrite, simultaneous deposition of in Pb-Zn ore deposit, 88M/2634; England, Cumbria, Hartley Birkett, Higher Longrigg mine, occurrence, 88M/6470; Germany, Altenberg tin deposits, occurrence, chem, compn., 88M/2635

Tephra. Belgium. Liège Remouchamps, in stalagmite, Pleistocene stratigraphic marker, ²³⁰Th/²³⁴U dating, 88M/4549; Central America, mafic to intermediate, intra-eruption changes in compn., 88M/2926; Germany, E. Eifel volcanic field, Quaternary, 40Ar/39Ar laser dating of single grains, 88M/3216; Japan. Shizuoka University, Oshika fm., descriptn., 88M/1326; Mexico, Chiapas, El Chichon, 1982 eruption, heavy min. study, 88M/4602; New Zealand, South Is., Kawakawa Tephra, new occurrences, distribn., 88M/1329; North America, in altered, unaltered states, catalogue of, for use in studying tephra diagenesis. 88M/1349; USA, Alaska, Fairbanks, Old Crow, Pleistocene, TL dating, 88M/3248; Washington, Mt. St. Helens, computation of volcanic hazard maps for tephra fallout, 88M/4597

Terpenoids v. hydrocarbons

Terrains, simple overthrust, two-dimensional modelling of P-T-time paths of regional metamorphism in, 88M/4689; Canada, British Columbia, Cadwallader group and Intermontane-Insular superterrain boundary, geol., 88M/4409; USA, Alaska, geol. framework, 88M/4408; E central Alaska, Pb isotopic fingerprinting. 88M/3911; Connecticut, Avalon, U/Pb dating, geol. evidence for Late Palaeozoic anatexis, deformation, accretion, 88M/1655; N. midcontinent, Archaean, Proterozoic basement, geol., metallogeny, 88M/5241; USA and Canada, Gt. Lakes region, Archaean, Proterozoic, metallogeny of, 88M/5239; Far NE USSR, role in construction, evolution of Pacific continental margins, 88M/6124

Teschenite, Outer Western Carpathians, selected rock types of teschenite assocn., petrol., geochem., 88M/4477

Tetrahedrite, argentian, nature of Cu, Ag sites in, EXAFS spectroscopy, 88M/5149; crystal chem., 88M/5148; effect of substitutions on cell dimension of, 88M/1053; Fe-Zn exchange reaction between tetrahedrite and sphalerite in natural envts., 88M/1049; Bulgaria, Madan ore field, zincian, and zincian tennantite, simultaneous deposition of, in Pb-Zn ore deposit, 88M/2634; Altenberg deposits, Germany, tin occurrence, chem. compn., 88M/2635

-, freibergite, Spain, Grupo Cantabria Pb-Zn deposit, occurrence, 88M/3581

THAILAND, robertsite in sedimentary phosphate ore, 88M/6079

Thaumasite, South Africa, transparent, yellow, gem notes, 88M/5520

Thermal conductivity, effect of radiation in transient hot-wire measurements on solids, 88M/4782; effective, of dispersed materials. measurements of, 88M/4783

Thermobarometry, geologic, propagation of uncertainties in, 88M/0429

Thermodynamics, application of generalized numerical error anal. to, 88M/1664; calculation of thermodynamic props, of aqueous species and solubilities of mins. in supercritical electrolyte 88M/3665; model for aqueous solutions of liquid-like density, 88M/3663; modelling of geol. materials, mins., fluids, melts, 88M/3660; models of molecular fluids at elevated P, T of crustal metamorphism. 88M/3668: of mins, and melts, 88M/3654: of multicomponent systems containing several solid solutions, 88M/3662; values at low T for natural inorganic materials, (book), 88M/0106

Thermoluminescence dating age determination

Tholeiite v. basalt

Thomsenolite, China, Jiangxi Province, Songshugang, in new type of low T hydrothermal altered clay vein, 88M/3357; Greece, Laurium, occurrence, 88M/4823

Thomsonite v zeolite

Thorianite, natural, isotopic disequilibrium effects in leaching of, 88M/2137

-. uranothorianite. Italy. Latium, occurrence. 88M/1576

Thorium, equilibrium adsorption of Th by metal oxides in marine electrolytes, 88M/5355; kinetics of reversible Th reactions with marine particles, 88M/3696; radiochem. specialization of rocks for K, Th, relation with mineralization, 88M/3841

 isotope dating v. age determination
 isotopes, ²²⁸Th, ²³⁰Th, ²³²Th, in sediments, detn. by anion exchange, nuclear spectrometry, 88M/4942

mineralization, Poland, Sudety Mts., borehole spectrometric gamma measurements in search for, 88M/0907

Thortveitite, vibrational interactions tetrahedra in, 88M/5078

Tibet v. China

exploration geochem. workshop, 88M/0898; exploration geochem., geochem. multivariate modelling, integration with petrophys. data, 88M/0899; weathered, unweathered, gold abundances vs. grain size in, 88M/2331; Canada, New Brunswick, geochem., applications, acid sensitivity, min. exploration, 88M/2328; Nova Scotia, Forest Hill Au dist., dispersal of Au and related elems, in. 88M/2475; Quebec, Casa-Berardi Au area. till sampling, case history in orientation. discovery, 88M/0882; Canadian shield. assoc. with Au mineralization, Au distribn., dispersion in, 88M/0883; N. central Sweden. Västanå-Järkvissle, Sn-Li occurrence found by regional grid sampling of heavy-min. till concentrates, 88M/0886; USA, Ohio, Cuyahoga County, glacial, surficial geol., 88M/5026

Tin, behaviour in metals, fluids, 88M/3694; in geol. materials, AAS detn., 88M/1680: methylation of tin(II) chloride, by ethyl jodide under simulated estuarine condns. in absence and presence of fulvic acid. 88M/5775; Algeria, Ahaggar, 'Taourirts' granites, geochem. study of concentration process of, 88M/2227

- deposits, crystal morphol, of cassiterite as criterion in commercial evaluation of. 88M/0291; granite-related, fundamental parameters for formation of, 88M/4444; geochem. granite-related. heritage. magmatic differentiation. 88M/4445: oxidation zones, 88M/2127, 88M/2149; three geochem, series, evolution, 88M/2173; Australia, Tasmania, Renison tin mine, development, application of EDXF borehole loggers, drill core analysers, 88M/2473; China, Guangxi. Jiuwandashan-Yuanbaoshan area, geol. features. minerogenic series, 88M/5204; Laili Mt., statistical prediction, 88M/0352; Nanling region, polymetallic, granite bodies related to, REE geochem., origin, 88M/5650; Altenberg, tetrahedrite, Germany, tennantite, occurrence, chem. compn., 88M/2635; Westerzgebirge-Vogtland Variscan granite, geochem., region, 88M/0716: Indonesia. Bangka, magnetic high-resolution seismic. exploration for, 88M/3555; Malaysia, Perak, Batu Gajah-Tanjong Tualang area. geochem, methods in exploration. 88M/0914; Poland, Stara Kamienica chain. stratiform, sulphide geochem. studies, 88M/2158; Sudetes, Gierczyn, structs... textures of ores, genetic interpn., 88M/1915; Portugal, white micas from, geochem., 88M/5555; South Africa, Bushveld complex, origin of colour zoning in cassiterite from. 88M/2610; central Transvaal, Zaaiplaats, fluid inclusion study, 88M/2160; Spain, Salamanca province, alluvial prospecting, 88M/0904; Montejo, Sn-Au, geochem., min. characteristics, 88M/5582; USSR, Khingan, REE in fluorite as indicators of min. formation condns., 88M/5927

mineralization, relation with magmatism. 88M/0636; SW Africa/Namibia, assoc. with Brandberg granite, 88M/3945; Australia. New South Wales, in granite, O isotope evidence for mixing of magmatic, meteoric waters during, 88M/0648; Queensland, Irvinebank-Emuford area, fracturecontrolled feldspathic alteration in granite assoc. with, 88M/6370; India, Uttar Pradesh, Almora dist., 88M/5201; Indonesia, Belitung, Tebrong area, and geochem. anomalies in non-residual overburden, relationship between. 88M/0877; USA, Alabama, northern piedmont, related to granitic rocks, geochem. aspects of, 88M/4527; USSR, Neydeck massif, relationship with granites, 88M/2157; Primor'e, new type, in nearly-intrusive zones, 88M/0289

mines, Australia, Tasmania, Renison, dynamic hydrothermal modelling, 88M/5279; England, Cornwall, S. Crofty mine, bismuthinite, occurrence, 88M/1564

- ore, stannoidite-bearing, mineralogy, texture, physicochem. envt. of formation, 88M/0619
- systems, F-, B-rich, contrasting evolution of, 88M/3883
- --- tantalum mineralization, USA, Alabama, Coosa County, Rockford, assoc. with granite, 88M/4528
- --tungsten deposits, Portugal, Beira Baixa,
 Serra de Estrêla granitic massif, tectonics,
 magmatism, hydrothermalism and Sn-W
 aplite-pegmatite and quartz veins,
 88M/1860; Spain, Salamanca, Saucelle,
 paragenesis, alteration, 88M/5195
- — metallogeny, SW Africa/Namibia, 88M/3896
- —— mineralization, Spain, Careres, Parilla ore deposit, hydrothermal fluid evolution, 88M/1908
- — ores, *Portugal*, and assoc. granites, evolution, 88M/1880
- — system, South Africa, Lease granite, granophyric, miarolitic mineralized granite at apical region of, 88M/1262
- Tinguaite, Brazil, São Paulo, Jaboticabal, petrol., 88M/2880
- Tintinaite, USSR, E. Transbaikalia, Srednegolgotaiskoe deposit, occurrence, 88M/1062
- Tiptopite, framework beryllophosphate isotypic with basic cancrinite, crystal struct., 88M/0281
- Titanates, Zr, Hf, and solid solutions, phase transformation, thermal expansion, 88M/5406
- Titanite, iron in, Mössbauer-spectroscopy study, 88M/3449; France, N. Finistère coast, high concentrations of, in heavy beach sands, indicate longshore drift, 88M/6323; USA, California, Salton Sea geothermal field, in shales, 88M/2612; Yugoslavia, Alinici, in hydrothermal veins, 88M/6077
- Titanium, Ti-bearing heavy-min. placer deposits, offshore, economics and search for, 88M/3606
- Titanoclinohumite v. humite
- Titanohematite v. hematite
- Titanomaghemite v. spinel, maghemite
- Titanomagnetite v. spinel, magnetite
- Titantaramellite v. taramellite
- Tobelite v. mica
- Tobermorite, (Al + Na)-substituted synthetic, cation-exchange props., 88M/2069; [Na + Al]-substituted, and ganophyllite, comparison of cation exchange in, crystal-chem. implications, 88M/5115
- Todorokite, crystallochem. systematics, 88M/0270; transformation of birnessite to, under mild hydrothermal treatment, exptl. study, 88M/0526
- TOGO, Dahomeyide orogenic belt, Bassar, Proterozoic phosphate deposit, geol., 88M/3612
- Tonalite, vapour-absent, melting at 10 kbar to simulate dehydration-melting in deep crust, 88M/3643; Japan, Abukuma Highland, Matsukawa-ura, chem. compn., 88M/2244; S. Portuguese zone, relations to volcanites, min. deposits of Iberian Pyrite Belt, 88M/4456

Tonalitic-trondhjemitic rocks, Archaean, geochem. constraints on origin, implications for lower crustal compn., 88M/1115

SUBJECT INDEX

- TONGA, *Ha' apai group*, effectiveness of soil taxonomy for prediction of soil chem. props., 88M/0217
- Tonstein, Belgium, zircon in, morphol. study, stratigr. importance, 88M/4645; Poland, 'Belchatów' brown coal mine, min., petrogr. features, 88M/1743; South Africa, West Waterberg, petrol., min., geochem., 88M/5021
- Topaz, bicoloured, descriptn., 88M/2108; from different envts., ion-microprobe anals. of Li, B in, 88M/0978; in silica and alunite deposits, implication for high fluoride concn. in fossil geothermal water, 88M/2546; irradiation to give deep blue colour, 88M/0580; rutilated, misnomer, 88M/2099; single-crystal, vibrational spectra, 88M/0590; Brazil, Minas Gerais, occurrence, 88M/0579; Hong Kong, min. watch cases, descrptn., 88M/0585; India, Orissa, occurrence, 88M/4824; USA, Maine, Topsham, occurrence, 88M/4830
- Torbernite, USA, Maine, Topsham, occurrence, 88M/4830
- Tosudite, China, Jiangxi Province, Songshugang, in new type of low T hydrothermal altered clay vein, 88M/3357; France, Massif Central, Li-bearing, occurrence, anals., 88M/3356; France, Massif Central, Echassières, occurrence, 88M/5016
- Tourmaline, Mössbauer effect study on mixed valence state of iron in, 88M/3456; natural and irradiated pink, optical absorption spectroscopy, 88M/6437; REE distribus. in, INAA technique involving pretreatment by B volatilization, 88M/6010; Zn-bearing, from rare-metal pegmatites, 88M/4249; E Africa, colour-changing chromiferous, anals., 88M/5504; Afghanistan, Pamir and Hindu Kush, from pegmatites, Ta in, 88M/5552; South Australia, Umberatana, chem. variation in, 88M/0983; Canada, Manitoba, Tanco, metasomatic, fluid inclusions in, 88M/5547; SE Ontario, occurrence, 88M/6013; Italy, Novazza, diff. types, in hydrothermal system, 88M/6362; Mexico, Sonora, El Correo, hydrothermal, assoc. with mineralization, tr.-elem. variation in, 88M/2488; New Zealand, Taranaki, McKee fm., heavy min. suites of core samples, implications for provenance, diagenesis, 88M/4664; Poland, Strzegom, magmatic, 88M/3024; USA, California, Mesa Grande, Himalaya mine, famous source, 88M/2100; Idaho, Boehls Butte, in anorthosite, 88M/6011; South Dakota, Bob Ingersoll pegmatite, REE contents, 88M/2130
- —, elbaite, USA, Maine, Paris, Mt. Mica, unusual, large specimen of, 88M/4843
- --, gem, *China*, *Xinjiang*, fluid inclusion study, 88M/5505
- Tourmalinite, assocn. with stratiform scheelite deposits, 88M/3520; Australia, Northern Territory, Rum Jungle, geol. setting, genetic, economic implications, 88M/3906; SW Greenland, stratiform, in Archaean

- Malene supracrustal rocks, 88M/6105; USA, Quebec, Aphebian Mistassini group, formation of, 88M/0984
- Trabzonite, *Turkey*, *Trabzon county*, new. min., 88M/2665
- Trachyte glass, hydrothermal conversion into zeolite, 88M/5486
- Travertine, USA, California, Coast Range, in CO₂-rich spring, chem., mineralogy, 88M/4049
- resources, *USA*, *Wyoming*, report, 88M/1948
- Tremolite v. amphibole
- Triassic–Jurassic boundary, new Early Jurassic tetrapod assemblages constrain extinction event, 88M/0966
- Tridymite, high-order thermal-motion tensor anals., 88M/5125; high-T transformation of single crystals to cristobalite, 88M/3743; kinetics of formation, 88M/2085; orthorhombic-I, structl. change with T, study based on second-order thermal-vibrational parameters, 88M/5124; struct. defects, 88M/3477; to cristobalite transformation mechanisms, TEM study, 88M/5485; E. Pacific Rise, in andesite from 3400m depth, 88M/2909
- TRINIDAD AND TOBAGO, Northern Range, low-grade metasediments, min., metamorphic geol., 88M/6432
- Triplite, USA, Colorado, Crystal Mountain dist., in pegmatites, 88M/4834
- Triploidite-wolfeite, *Portugal*, *Mangualde*, occurence, 88M/6081
- Trolleite, *USA*, *Virginia*, *Willis Mt.*, and assoc. mins. in kyanite quartzite, 88M/6080
- Trona samples, diff. methods for anal. of, 88M/3282
- Trondhjemite, Canada, Ontario, Wawa, Archaean, auriferous quartz veins in, alteration pattern, fluid inclusions, 88M/0304; India, W Dharwar craton, Th, U contents of, 88M/0806; S. Portuguese zone, relations to volcanites, min. deposits of Iberian Pyrite Belt, 88M/4456; USA, Alabama, N piedmont, structl. petrol., petrogenesis, 88M/4521
- intrusion, Philippines island arc, Paracale intrusion, geol. setting, petrogenesis, 88M/1397
- Tschermigite, H and D distribus. in, neutron-diffraction study at 25–75°C, 88M/2048
- Tsumcorite, South Australia, Puttapa, occurrence, 88M/6070
- Tsumebite, Germany, Hesse, Altenmittlau, occurrence, 88M/4808
- Tsunami, *Indonesia*, *Krakatau*, 1983, scenario of, 88M/4577
- Tufa deposit, *Wales*, *Caerwys Tufa*, Flandrian, descriptn., 88M/1416
- Tuff, ⁴⁰År/³⁹Ar dating of cleavage formation in, during anchizonal metamorphism, 88M/4862; fission-track dating calibration of Fish Canyon Tuff standard in French reactors, 88M/3253; zeolitized, struct. from SEM data, 88M/4545; Antarctica, James Ross Is., proglacial delta-front reworked, regional significance of, 88M/4589; Australia, Queensland, late Triassic, distal air-fall, 88M/6253; Japan, Hokkaido, Oshima Peninsula, Cainozoic, fission-track

dating, 88M/1628; Kenya, Bakata fm., Buluk Member, fission track age of, 88M/4893; Korea, Weolseong, welded, infilling volcanic vent, 88M/1327; N. Wales, Pitts Head Tuff fm., Ordovician, subaerial to submarine welded ash-flow. 88M/2895; USA, California and Arizona, Peach Springs Tuff, heavy-min. suites confirm wide extent, 88M/2917; Nevada, Yucca Mt., diagenetic mins., distribn., chem., 88M/1359; Texas, Jackson group, altered, interbedded with lignite, kaolinite, opal-CT, clinoptilolite in, 88M/1442; Utah, Mt. Belknap Volcanics, Joe Lott, petrol., chem., 88M/6277

-breccia pipe, Italy, Sicily, Cozzo Molino, ultrabasic, basic nodule suite in, petrol., 88M/6173

Tungsten, absorptiometric detn. in rocks after selective adsorption on Sephadex gel, 88M/4939; existing forms in hydrothermal solutions, 88M/0486; in spring waters, ICP-MS detn., 88M/5943; ICP-AES, Algeria, Ahaggar, 'Taourirts' granites, geochem, study of concentration process of, 88M/2227; Canada, Quebec, Abitibi, Dest-Or orebody, distribn., 88M/0867; N Pacific, in waters, 88M/4108; USA, Iowa, in soils, plants, sewage sludge, 88M/5341; USSR, Sikhote-Alin, in magmatic systems, geochem., geodynamic features, 88M/0729

- deposit, revised classification, 88M/1871; SW Africa, Krantzberg, alteration-88M/6367; mineralization, Australia. Queensland, Mt Carbine, fluid, metal sources in, 88M/5594; China, Jiangxi province, Xihuashan, fluid inclusion study, 88M/3594; relation between evolution of granite and mineralization of, 88M/3903; France, geochem. soil-surveying for, 88M/2461; Aveyron—Massif Central, Châtaigneraie dist., research, 88M/1876; Tarn, Fumade, geochem., petrogr., 88M/1907; Morocco, overview, 88M/1887; Portugal, white micas from, geochem., 88M/5555; Spain, Trujillo, anals.. 88M/1877; Spain. economic classification, 88M/5192; Sweden, Sandudden, epigenetic model, 88M/3569
- exploration, Norway, Nordland, Valnesfjord region, 88M/0901
- mineralization, Austria, Mittersill, boninites as poss. source rocks of, 88M/3893; China, Jiangxi Province, relationship of alkaline metasomatism to, 88M/2169; SW England, and magmatism, 88M/1875; France, Yaudet pluton, 88M/3575; Brittany. Pakistan, Baluchistan, Saindak xenothermal alteration and, 88M/1921
- orebodies, central Morocco, vein-type, REE behaviour during thermal metamorphism, hydrothermal infiltration assoc. with, 88M/5751
- -copper-molybdenum mineralization, Canada, New Brunswick, Sisson Brook, overburden geochem. related to, example of short- and long-distance glacial dispersal, 88M/0885
- -molybdenum mine, Korea, Dae-Hwa, stable isotope studies, evidence of meteoric water interaction, 88M/0645

— tin deposits, *Portugal*, greisenized granites and metasomatic schist of, geochem., 88M/3813

TUNISIA, geothermal gradient map from well data, 88M/4778; Zriba Guebli, hydrocarbon inclusions in fluorite, microspectroscopy, 88M/3870

Turbidites, Atlantic Ocean, Zaïre Fan, tr. elem. fractionation, distribn. in, 88M/2306; N Atlantic, Madeira Abyssal Plain, distal, tr.-elem. mobility during early diagenesis in, 88M/2293; NW Atlantic, mid-ocean channel of Labrador Sea, petrogr., provenance, 88M/1435; Australia, Cobar, deformed, Cu, Au deposits in, 88M/0354; Belgium, Brabant province, Palaeozoic, lithostratigr., petrogr., geochem. study, 88M/4708; Stavelot Massif, sedimentary structs. in Lower Salmian, indicators of turbidite 88M/4638; sedimentation. Finland. Tampere schist belt, early Proterozoic metagreywacke-slate sequence, 88M/2958; Wales, Wenlock turbidite system, petrol., 88M/1145; Welsh Borderland, Bailey Hill fm., Ludlow Series, reinterpreted as distal storm deposits, 88M/1146

TURKEY, Mn deposits, review, 88M/3519; sorption/desorption of Cs on clay, soil fractions, 88M/5010; SE. petroleum geochem., 88M/4134; W, kinematic indicators on active normal faults. 88M/2715; Adana Basin, origin of hydrocarbons, 88M/4135; Akhisar (Manisa) region, Liassic volcanic rocks, distribn. of early Mesozoic volcanism around Aegean Sea. 88M/4484; Anatolia, Kirsehir batholith, pseudoleucite, use as P indicator, 88M/1263; Central Anatolian massif, geochronol., 88M/3220; central Anatolia, Alpine belt, composite monzonitic pluton, parallel whole rock isochrons, 88M/0026; Divrigi region, iron deposits, geochem., elem. correlation, 88M/3895; E Anatolia, initiation of neomagmatism, 88M/1315; W Anatolia, Tavşanli-Domaniç (Kütahya), volcanic rocks, characteristics, significance in Cainozoic volcanism, 88M/4486; Inner Anatolian granitic belt, Celebi intrusion, geochem., genetic interpn., 88M/4481; Antalya, shear structs, in anhydrite at base of thrust sheets, 88M/2713; Arçakoca, Devonian sedimentary series, mineralogy, illite crystallinity studies, 88M/3407; Baskil, orbicular gabbro, origin. 88M/4480; Bayindir-Akpinar (Kaman) area, alkaline rocks, geochem., genetic interpn., 88M/4485; Çankiri-Çorum basin, clinoptilolite from continental Tertiary sediments, 88M/4281; SW Caykara (Rize), border facies of granitic batholith, petrogr., 88M/4487; *Emet*, borate deposits, geochem., origin, 88M/3604; between Gelveri and Kikilcin, volcanic rocks, characteristics, 88M/4568; Gümüsköy, silver ore, min. paragenesis, geochem., 88M/3590; Hatay, Kizil Dağ ophiolitic rocks, REE behaviour in, 88M/2226; Hisarcik, Emet lacustrine basin, Neogene, geol. investigation, 88M/1423; Hüyük, baryte occurrences in Lower-Middle Cambrian formations, 88M/3605; Izmir-Selçuk-Çamlik

fulgurite village, Mezargediği area, occurrence, 88M/1455; Kayserilinin Dere. mineralizpyrite-chalcopyrite-magnetite ation and Tertiary volcanism, 88M/3542; Kefdağ and Soridağ, generation of chromite bodies, new approach, 88M/3588; Kirşehir, NE of Kaman region, gabbros, min., petrogr., geochem., 88M/4483; Kizildağ-Elaziğ, features, origin, 88M/3589; Menderes Massif, metamorphic rocks, origin, evolution, Rb/Sr, O isotope study, 88M/4057; between Nigde and Nevsehir, volcanism. characteristic 88M/1313; Ordu, Kuyucak, Upper Miocene petrol., genetic implication, 88M/1314; Pancarli, Ni-Cu sulphide mineralization, genesis, 88M/1917; E Pontides, Jurassic volcanism, geotectonics, 88M/4482; Central Pontides, Central Black Sea region, Canik, Pliocene volcanic rocks, min.-petrographic, geochem. investigation, 88M/4566; Pozanti-Karsanti ophiolite complex, stratiform chromite mineralization within, 88M/3591; Söke- Selçuk-Kuşadasi region, volcanic rocks, geol., petrochem. features, 88M/4569; Taurus Mts., parthéite, spectrometry, 88M/2549; Trabzon county, trabzonite, new. min., 88M/2665; Yenice-Cannakkale, Arapucandere, Pb-Zn mineralization, fluid inclusion studies, 88M/0375; Yozgat area, major, tr. elem. distribn. in volcanic rocks, 88M/3940; Zamanti (Aladağlar-Yahyali) region, geochem, prospecting for carbonate-bearing Pb-Zn deposits, 88M/4172

Turquoise, and simulants, anals., 88M/5510

UGANDA, Western Rift, lower crustal granulite xenoliths in carbonatite volcanoes, 88M/1255

Ultra-agpaitic mineral associations, typomorphism, (book), 88M/0107

Ultrabasic complexes, N. Norway, high-T, in Caledonides, regional setting, relationships, 88M/2815

- dykes. Canada, Cuthbert Lake, differentiation of, 88M/6214
- magma v. magma, ultrabasic
- massifs, Spain, Málaga, Cr-Ni ores in, characterization, 88M/1879
- rocks, alkali, Ti, Nb, Ta distribns. in, 88M/5641; PGE in, min., geochem., review. 88M/3900; reaction model for olivine serpentinization in, 88M/6145; China, Xinjiang, Junggar, Alpine-type, genesis, evolution, 88M/1279; Cyprus, drillhole CY—4, structl., petrol. features, 88M/1382; India, Tamil Nadu, Salem, titanoclinohumite from, 88M/6000; Italy, Ivrea Zone, Val Sesia, petrogenesis, tr. elem., isotope geochem., 88M/1118; New Zealand, delineation by computer processing of satellite imagery data, 88M/6131; Poland, Lower Silesia, significance of chromite chem. to petrogenesis of, 88M/2839; Scotland, Inner Hebrides, Rhum layered complex, 88M/1193; Tibet, Xigaze ophiolite, petrol., texture, constraints for mantle struct. beneath slow-spreading ridges, 88M/6293; USA, Montana, Stillwater complex, REE

evidence for formation of, magma evolution, 88M/2277; North Carolina, Newfound Gap, small ultrabasic body, geophys. study, 88M/6216; Washington, N. Cascades, of fracture-zone ophiolite, 88M/4620

— xenoliths, enhanced ³He ^AHe ratios and cosmogenic He in, 88M/5613; Antarctica, Ross Sea embayment, in McMurdo volcanic group, 88M/2753; Canada, British Columbia, Rayfield River, petrol., 88M/2872; Northwest Territories, Somerset Is., Ham, from kimberlite, 88M/4513; France, Massif Central, Haut-Allier, carbonatization of, 88M/1450; Italy, Sicily, Etna, petrol., 88M/6172

Ultramarine v. lazurite

UNION

Ultramylonites, preferred orientation or phyllosilicates in, 88M/2728

SOCIALIST

OF SOVIET

REPUBLICS, bornite crystals, occurrence, 88M/4825; hydrothermal synthetic emerald, props., 88M/0576; systematics of plutons based on natural series of magma rocks, 88M/0727; xenoliths, occurrence. 88M/2745; Far NE, role of allochthonous terrains in construction, evolution of Pacific continental margins, 88M/6124; Agaskyrskoe Mo deposit, relations of stockwork of granite veins mineralization, 88M/0376; Anabar Shield, quartz from polymetamorphic rocks, characteristics of inclusions, deformation, 88M/4739; zircon-bearing eclogites, new variety in kimberlites, 88M/4740; Baer-Bassits ophiolite complex, ophicalcite in, age, origin, 88M/4660; Belomor'ye, apoamphibolite migmatites, granites, geochem, features, 88M/5754; Rb, Sr behaviour in formation of ultrametagenic granitic rocks, 88M/5644; Bering Sea, Shirshov Ridge, Cenotypic lava and mantle xenoliths, combined study, 88M/4584; Caucasus geosyncline, early to Middle Lias basin, rare, dispersed elems. in sedimentary Caucasus, 88M/2309; N. metamorphic schists, gneisses, petrochem., geol., 88M/1489; Mn distribn. in ores, primary aureoles of sulphide-ore deposits, 88M/2161; Atsgarinskii sheet, metamorphic rocks, petrol., 88M/1490; Gt. Caucasus, contents of rare and ore elems. in quartz from different age magmatic formations, metamorphic series, 88M/2162; spilitic rocks, origin, 88M/2234; U concn., distribn. in accessory apatite from plutonic, metamorphic rocks, 88M/5576; Sophian uplift, evolution of regional metamorphism, 88M/3094; Chelyabinsk coal basin, bazhenovite, new min., 88M/4336; El'kon horst, porphyry Cu mineralization, new type, 88M/0308; Gissar Ridge, effects of palaeohydrochem. condns. of formation on Al, Ga in Upper Cretaceous clay rocks, 88M/0771; Gornyi Altai, Sinyukhinskoe ore area, skarn formation and K metasomatism, 88M/4687; Ilmen Mts., sadanagaite from alkaline complex, 88M/4260; Inagli, metasomatites, struct., compn., 88M/1270; Kachar, iron-ore deposits, REE in apatites, pyroxenes, 88M/5575; Kandelaksha Bay, Kolvitska Massif, ornamental violet pseudomorph after plagioclase, 88M/0582; Kerch ores, new data on mineralogy, 88M/1919; Khankai massif, data from fluid inclusions, geothermobarometry on metamorphic history, 88M/3095; Khingan tin deposits, REE in fluorite as indicators of min. formation condns., 88M/5927; Komandor Is., Sr isotope distribn. in igneous rocks, 88M/5647; Komsomol region, valency states of Fe, lanthanoids in mineralized formations from cassiteritesilicate deposits, 88M/2163; S. Koryakia, Komandorsky basin, origin of Cainozoic volcanic series, geochem., exptl. data, 88M/0458; Kotui River basin, natrolite, apophyllite, from amygdaloidal lava, 88M/6046; S. Krivoy Rog struct., min., geochem. features of late Archaean weathering crust, 88M/3412; Kushmurunskii graben, min., geochem. features of formation of Mesozoic bentonites, 88M/1758; Lake Ladoga, Pellotsalo, microcline, re-examination of, min. implications, genetic considerations, 88M/4275; Magnitogorsky synclinorium, accessory chrome-spinels, problems of petrol. of basalts, 88M/4298; Maimecha-Kotuiskaya province, Magan, apatite deposit, petrol., 88M/2849; Malyi Caucasus, Kedabekskii and Dashkesanskii, granitic rocks, geochem. features, 88M/0726; Malyy Karatau basin, Dzhanatas deposit, V, Cr, Ni, Zn, Pb, As geochem. in phosphoritebearing beds, 88M/5714; Mangyshlak Peninsula, Cretaceous-Tertiary boundary, expandable palygorskite from, 88M/3413; Mir pipe, deep rock xenoliths, 88M/1274; Mongolian-Okhotsk belt, Mesozoic magmatism, poss. geodynamical interpn., 88M/0307; Neydeck massif, relationship of tin mineralization with granites, 88M/2157; Olekminskaya folded zone, early Archaean granulitic metamorphism, 88M/3093; Omolon region, Upper Famennian-Tournaisian, sedimentol., lithogeochem., 88M/4035; Pamirs, Cr-bearing muscovite in metasomatic, hydrothermal formations, 88M/4263; SW Pamir, variations in chem. compn. of garnets from pegmatites, 88M/6006; Pay-Khoy and N. Urals, black shale formations, Hg geochem., 88M/2308; Podkamennaya Tunguska R., Kuz'movka dolerite sill, trap-assocn., geochem. struct., 88M/2237; Primor'e, new type of tin mineralization in nearly-intrusive zones, 88M/0289; mineralization in stanniferous dacitic automagmatic breccias, 88M/3521; Shirokopadninskove deposit, manganous Ba-rich phlogopite, occurrence, 88M/4265; Rybachy peninsula, arkoses, min. compn., 88M/2983; Salma massif, geochem. characteristics of rocks of near-continental rapakivi- granite zones, 88M/3947; Sal'nye tundras, Laplandian granulitic belt, metabasites, petrochem. features, origin, 88M/1389; Severoonezhsk region, discovery of lithiophorite in bauxite-bearing deposits, 88M/6061; Sikhote-Alin, W-bearing magmatic systems, geochem., geodynamic features, 88M/0729; Tadzhur rift zone,

geochem, anomalies in near-bottom waters, 88M/2388; Tien-Shan, Kumyshtag massif, distribn. of U and other microelems. in granites, 88M/0732; Turkestan-Alai, accessory mins. of orogenic granitic complexes, 88M/1271; Tuva, Sangilen, granulite, amphibolite facies, elem. contents, distribus. in mins., 88M/2355; Udokan Cu deposit, electrochem. characteristics of sulphides from, 88M/4312; Urals, alkali rocks, U/Pb dating, 88M/4899; channels in rutile crystals, 88M/1023; eugeosynclinal volcanic rocks, geochem., lanthanoid petrogenesis, 88M/0725; magmatic clinopyroxenites, evolution. 88M/4479; Beresovsk, cassedanneite, new min., 88M/6086; Berezovskoe deposit, gold nuggets at deep horizons, compn., struct., morphol., occurrence, 88M/2607; Lemva zone, geochem. identification of volcanic material in black shales, 88M/3941; Polar Urals, compn. of water extracts from quartz, 88M/6043; Saureyskoe, baryte-polymetallic deposit, formation condns., ore-controlling factors, 88M/1918; Middle Urals, Murzinskii shift's zone, recrystallization of vein quartz, 88M/1488; Revdinskii region, alkaline magmatism, 88M/1266; S Urals, fluorellestadite, new min., 88M/4339; magnesian dacites of basalt-rhyolite formation, 88M/2903

—, ARMENIAN SSR, chekhovichite, new min., 88M/6087; Megradzorskoe deposit, metasomatism, 88M/4686

—, AZERBAIJAN SSR, metals in bituminous rocks, 88M/0769

KAZAKH SSR, Kazakhstan, chekhovichite, new min., 88M/6087; decompression model for origin of fine-grained granites in Permian intrusions, 88M/4501; Nd-churchite from weathered metamorphic rocks, 88M/1076; Aksai ore greisens, min.-geochem. characteristics, 88M/0640; Karatau, steigerite, vanalite, from carbonaceoussiliceous V-bearing formations, 88M/1038; hydrothermal-Kokchetov Massif, metasomatic formations in Devonian red beds, 88M/0641; Zhamanshin crater, blue glass, new impactite variety, 88M/5996; Rudny Altai, Maleeva ore deposit, age relation between basic dykes and ore mineralization, 88M/0377; polymetallic deposit, hydraulic structs. in, 88M/0378; Korbalikha deposits, use of δ^{34} S data in reconstructing ore formation condns., 88M/2164; Zyryanov, sulphidepolymetallic deposit, geochem. features of solutions, mineralizing 88M/5253; Zyryanovskii ore region, basic rocks, geochem, zoning of, 88M/2235

—, KIRGHIZ SSR, Kensuyskoe, skarn-scheelite deposit, geol. condns. governing formation, 88M/5252

—, TADZHIK SSR, Tadzhik depression, geochem. specialization in Mesozoic deposits, 88M/5710

—, TURKMENSKAYA SSR, Sumbar-SM-4 section, Rh distribn. at Cretaceous/Tertiary

boundary analysed by ultrasensitive laser photoionization, 88M/5709

dating, 88M/2029; Voronezh crystalline massif, petrol., 88M/588; typomorphism of chromespinels from sulphide ores in norite-diorite intrusions, 88M/5585; typomorphism of chromespinels from sulphide Cu-Ni, Ni-Co ores, 88M/4297; Zhamanshin crater, petrochem. types of impact melts, 88M/4235

-, RUSSIAN SFSR, central Aldan deposits, organogenic structs, in Au-bearing ores, Central Verkhneyakokutskiy graben, K alkaline magmatism, 88M/2848; Siberia, sideritesulphosalt mineralization, min.-geochem. characteristics, 88M/0621; struct., genesis of magnetites from 'ferri-ore complex' and carbonatites, 88M/4294; Siberian Platform, Malaya Botuoba area, Lower Palaeozoic rocks, mineralogy, 88M/4661; W. Siberia, Ce, Eu, Sc in sedimentary rocks, 88M/5713; W. Siberian plate, δ^{34} S values of oils, 88M/2431; Norilsk region, influence of petrogr. characteristics on physicomechanical props. of basalts, 88M/4793; BURYAT ASSR, Transbaikal, granitic rocks, geochem., use in prospecting, 88M/5645; REE and rare elems. in Cainozoic basic volcanic rocks, 88M/5646; typomorphism of quartz from Ta-bearing granites, 88M/1012; E. Transbaikalia, Srednegolgotaiskoe deposit, Sb-Bi 88M/1062; sulpho-salts, occurrence, KARELSKAYA ASSR, Karelia. zincochromite, new min., 88M/1098; Yalguba, heavy metals, S, in variolites, 88M/2233; Yatulia sediments, kaolinite, dickite, hydrous mica, genesis, 88M/5020; TUVINSKAYA ASSR, Kadyrelsky ore manifestation, kadyrelite, new oxyhalide of 88M/4340; YAKUT hexahydrite from kimberlites, 88M/4325; IR spectra, isotopic compn. of H, O in micas from kimberlites, 88M/2131; Dyakhtardakh, cassiterite-sulphide ore deposit, occurrence of leached ores in cryogenic zone of oxidation, 88M/0293; Ulakhan-Sis ridge, petrochem., geochem. features of magmatic rocks, 88M/2236; N. Yakutia, Arga-Ynnykh-Khay and Ynnykh-Khay granite intrusions, geol., geochem. features of granite complex formation, 88M/6193; Polar Yakutia, genetic features of multicoloured diopside crystals from skarns, 88M/4252; KAMCHATSKAYA OBLAST', models for subsurface sulphide ore generation, 88M/5186; rare accessory mins. from ultramafic volcanic rocks, 88M/4244; zoning of garnet, test of type of metamorphic zoning, 88M/1491; Kamchatka and Kurile Is., active volcanoes, geochem. monitoring, 88M/4583: Mutnovskii geothermal region, deuterium, ¹⁸O waters, 88M/0827; MURMANSKAYA OBLAST', Kola peninsula, Precambrian gabbroic rocks, petrol., 88M/1269; E. part of Baltic Shield, alkaline rocks, petrol., 88M/2807; Iokan'gskii massif, granite, petrol., 88M/1267; Khibiny massif, apatite deposits, modelling of formation, 88M/1205; dawsonite, first occurrence, crystalline struct., 88M/1067; mineralogy of contact formations, (book), 88M/0102; Khibiny apatite-bearing intrusion, compn. of rock-forming mins., and origin of apatite deposits, 88M/6192; Khibinsky Lovozersky complex, isotopic data for mins., rocks, genesis, 88M/3899; Kola superdeep borehole, geochem., condns. of formation of Precambrian complexes, 88M/3090; ore mineralization. 88M/3088; rock-forming mins., 88M/3089; zonality, age of metamorphism, 88M/3091

—, KURILE ISLAND ARC, hypogene struct., new data, petrol. consequences, 88M/1400; petrochem. variations of island arc andesites, 88M/5649; Recent magmatic rocks, ¹⁴³Nd/¹⁴⁴Nd, ⁸⁷Sr/⁸⁶Sr ratios in, 88M/5648; *Kurile–Kamchatka*, arc, back-arc xenoliths, petrol., 88M/2754

UNITED ARAB EMIRATES, Abu Dhabi, Shuaiba fm., Cretaceous baroque dolomite, petrog., stable isotope compn., 88M/4032; Musandam mts., Dibba zone, thrust tectonics, structl. evolution of Arabian continental margin, 88M/4616

UNITED KINGDOM, behaviour of U isotopes with salinity change in three estuaries, 88M/2373; marine sand and gravel dredging industry, 88M/5297; Welsh Borderland, hydrocarbons, occurrence in Cambrian sandstones, 88M/2424; v. also England, Ireland, Scotland, Wales, Gt. Britain

STATES OF AMERICA, UNITED characterization of lignite by pyrolysis mass spectrometry, multivariate anal., 88M/0862; lithosphere of continental USA, xenoliths in kimberlites, 88M/2735; midcontinent stratiform Cu deposits, and Poland, comparison, 88M/0290; passive margin of, 88M/4849; NE, ^{239,240}Pu in estuarine and shelf waters, 88M/3621; Hartford Basin, Jurassic lava flows, hydrothermal addition of excess 40Ar to, implications for time scale, 88M/3250; E, magma mixing and kimberlite genesis, min., petrol., tr. elem. evidence, 88M/4420; E Coast, Lydonia Canyon, ferromanganese coatings on glacial erratics, compn., morphol., 88M/2339; SW, record of subduction processes and within-plate volcanism in lithospheric xenoliths, 88M/2736; W, ore deposits in relation to mass distribn. in crust, mantle, 88M/0365; plate tectonic evolution of, 88M/4850; Proterozoic crustal history determined by Nd isotopic mapping, 88M/3252; tectonically active margin of. 88M/4851; NW, tectonic controls on magma genesis, evolution, 88M/0679; Adirondack Mts., granulites, post-metamorphic CO2-rich inclusions in, 88M/1504: Appalachians, evidence for late Palaeozoic brine migration in Cambrian carbonate rocks, 88M/0607; Holocene fluvial sands, opaque mins. in, 88M/6348; Appalachian Blue Ridge, Bakersville dyke swarm,

basaltic magmatism. Proterozoic petrogenesis, 88M/1289; geochronol.. Appalachian Basin, C, S relationships in Devonian shales as indicator of depositional envt., 88M/2336; central Appalachia, stratabound base metals, Au, in Fe-rich rocks of Proterozoic-early Palaeozoic rift setting, 88M/0360; Atlantic coast, offshore heavy min. resources, nature, distribn., 88M/3610; NE Basin and Range, kinematics of compressional and extensional ductile shearing deformation in metamorphic core complex, 88M/2712; Cascades, Wind River gold prospect, epithermal precious metal system, geochem., geol., 88M/2482; Center Pond pluton, phase separation, melt evolution in granitic rock genesis, 88M/1288; Colorado Plateau, genesis of carbonate in pyrope from ultramafic diatremes, 88M/6219; Columbia River basalt, Huntzinger flow, evidence of surface mixing, petrogenetic implications. 88M/1356; Denver basin, Palaeozoic oils, geochem. correlation, implications for exploration, 88M/4158; Forest Service lands, assessment of min. resource potential, 1964-1984, 88M/0295; Great Basin, lithophile-elem. mineralization assoc. with late Cretaceous two-mica granite, 88M/0363; Great Plains foreland basin, buoyant sub-surface loading of lithosphere, 88M/1558; Gt. Lakes region, metallogeny Archaean, Proterozoic terrains, 88M/5239; Gt. Smoky Mt. National Park, Pb in vegetation, forest floor, soils, 88M/1981; Gulf Coast, multiple fluid components of salt diapirs, salt dome cap rocks, 88M/5786; Gulf of California, variations of upwelling intensity recorded in varved sediment during past 3000 years, 88M/2340; Guaymas Basin, Mn geochem., 88M/4050; Mid-Continent, USA oils, geochem., 88M/4157; Desmoinesian Excello black shale, petrol., 88M/0185; N. midcontinent, Archaean, Proterozoic basement terrains, geol., metallogeny, 88M/5241; Mississippi River, variability of dissolved tr. metals in, 88M/4115; Lower Mississippi Valley, loess, stratigr., geochem., TL ages, 88M/4916; upper Mississippi Valley, Decorah subgroup, chem. correlation of Ordovician K-bentonite beds, 88M/0186; Potomac River and estuary, N distribn., ammonium adsorption, in sediments, 88M/1979: Rensselaer Plateau and Chatham slices of Taconic allochthon, basaltic rocks, chem., tectonic setting, 88M/4599; Rocky Mts. Greater Green River and Uinta-Piceance basins, Weber and Tensleep fm., pore-waters, origin, evolution, 88M/3988; S. Rocky Mts., Cainozoic volcanic rocks, REE compns., 88M/5675; Rozel Point Oil, occurrence, identification of organic S compounds in oils, sediment extracts, 88M/2450; San Andreas fault system, new evidence on state of stress. 88M/4791; San Juan Basin, thermal regime since late Cretaceous, relationship to San Juan Mts. thermal sources, 88M/1461; Sierra Nevada batholith, U, Th, REE fractionation in vertically zoned granodiorite, implications for heat production distribus., 88M/5676; Suwannee River, Cu binding by dissolved organic matter, fulvic acid equilibria, 88M/4161; White Mountains, alkaline ring complexes, Q.A.P.F. modal trends, comparisons with other complexes of world, 88M/4514

ALABAMA, chromite occurrences, 88M/0362; granites, context of special 88M/4516; granitic rocks, volume, overview, 88M/4515; Coosa County, Rockford granite, alkali metasomatism, trondhjemite genesis, 88M/4524; geol. setting, petrogr., min. chem., 88M/4523; igneous petrogenesis, tectonic setting, 88M/4525; Sn-Ta mineralization assoc. with, 88M/4528; Farmville granite, Rb/Sr geochronol., 88M/4531; inner piedmont, felsic gneisses, petrol., 88M/4517; Norphlet fm., diagenesis of æolian and fluvial feldspathic sandstones, 88M/4669; N piedmont, granitic dykes, intrusive chronol., progressive deformation, geochem., strain anal. of xenoliths, 88M/4519; granitic plutons, structl. setting, 88M/4518; geochem. aspects of tin mineralization related to granitic rocks, 88M/4527; granitic rocks, fluorine geochem., 88M/4526; granitic rocks, U/Pb, Rb/Sr isotopic evidence for age, origin, 88M/4530; trondhjemite, structl. petrol., petrogenesis, 88M/4521; Kowaliga and Zana, augen gneiss, granite, geol. setting, 88M/4520; N, inner piedmont, Rockford dist. O, C isotope distribus. in granitic rocks, metasediments, 88M/4529; Randolph County, Blakes Ferry pluton, petrogenesis, 88M/4522; Talladega County, Winterboro area, talc, chlorite, occurence, 88M/0395

ALASKA, massive sulphide deposits, Pb-isotope signatures, significance to min. exploration, 88M/2490; tectonostratigraphic terrains, geol. framework, 88M/4408; E central, Pb isotopic fingerprinting of tectono-stratigraphic terrains, 88M/3911; W, arc, back-arc xenoliths, petrol., 88M/2754; Alaskan Cordillera, Pacific border ranges, coast mts., distribn. of min. deposits, 88M/2480; Alaska Range, Ba-rich mica, occurrence, 88M/2584; Alaska-Juneau Au deposit, fluid inclusion constraints on genesis of, 88M/2492; Aleutian volcanic arc, high-Mg basalt, phase relations, implications, 88M/1996; Pb isotopic data, evidence for evolution of lithospheric plumbing systems, 88M/0739; petrol., evolution, 88M/6268; test of quartz eclogite source for parental magmas, mass balance approach, 88M/0738; Annette, Gravina, and Duke islands, geol., 88M/0034; Cold Bay implications volcanic centre, fractionation and mixing mechanism in calc-alkaline andesite genesis, 88M/6206; Aleutian arc, Yantarni volcano, petrogr., chem., geol. history, 88M/1350; Baranof Is., Sitka Graywacke, regional thermal metamorphism, deformation, 88M/3027; Fairbanks, Old Crow tephra, and loess, Pleistocene, TL dating, 88M/3248; Fairbanks mining dist., bulk mineable vein

type, disseminated gold mineralization, 88M/5237; Goodnews Bay dist., Pt-group elems. in magnetic concentrates, 88M/1020; Gulf of Alaska seamount province, ferromanganese deposits, mineralogy, chem., origin, 88M/5606; Healy quadrangle, two min. provinces, streamsediment geochem., 88M/2489; Katmai, kinematic, rheological modelling of 1912 pyroclastic flow, 88M/6273; Katmai National Park, Valley of Ten Thousand Smokes, 1912 eruption, rhyolitic, petrol., 88M/4595; North Slope, presence of dinosaurs, high-latitude, latest Cretaceous envts., 88M/3170; Orca Basin, S, O isotopic compns. of dissolved sulphate, implications for origin of high-salinity brine, oxidation of sulphides at brine-sea-water interface, 88M/4114; Pavlof Volcano, eruption characteristics, cycles, relation to regional earthquake activity, 88M/1351; Yakobi and Chichagof Is., gabbronorite, petrogenesis, 88M/1285; Yukon-Koyukuk province, tectonic implications of palaeomagnetic, geochronol. data, 88M/3249

-, ARIZONA, crustal heritage of Ag, Au ratios in ores, 88M/3564; detachment zones of Cordilleran metamorphic core complexes, thermal, fluid, metasomatic regimes, 88M/6372; Coyote metamorphic core complex, shear zone origin of quartzite mylonite and mylonitic pegmatite, 88M/1183; Geronimo volcanic field, xenolith-bearing alkalic basalts, petrol., geochem., evidence for polybaric fractionation, implications for mantle heterogeneity, 88M/4437; Jerome, United Verde massive sulphide deposit, Early Proterozoic, geochem. of footwall alteration assoc. with, 88M/0669; Peach Springs Tuff, heavy-min. suites confirm wide extent, 88M/2917; Peridot Mesa, spinel peridotite nodules, tr. elem., isotopic geochem., 88M/3972; San Carlos, lab.-induced destabilization, stoichiometry in olivine, 88M/5448; Sonora Desert, Aravaipa Valley, 18O, deuterium distribn. in rainfall, runoff, groundwater, in semi-arid basin, 88M/5861

—, ARKANSAS, bibliochrony of igneous rocks, emphasis on diamonds, 88M/4432; Cretaceous alkalic complexes, isotopic relationships, 88M/4431; Cretaceous alkalic province, petrol., geochem., 88M/4429; Blue Ball kimberlite, mineralogy, petrol., geochem., 88M/1292; Pike County, Twin Knobs TK1 lamproite, geol., petrogr., 88M/4428; Potash Sulfur Springs igneous complex, large zircon crystals, U/Pb age, 88M/4430

—, CALIFORNIA, continental margin, tectonics, 88M/4855; granite batholiths, products of local assimilation, regional-scale crustal contamination, 88M/1294; probable low-P intrusion of gabbro into serpentinized peridotite, 88M/1295; sand-sized kaolinized feldspar pseudomorphs in soils, 88M/5063; coastal S., profiles of dissolved and particulate Th isotopes in water column, 88M/5844; central, groundwater, stable isotopic compn. as

indicator of mid-Pleistocene tectonic evolution, 88M/5859; N and central, Phanerozoic continental accretion and metamorphic evolution, 88M/2705; Big Maria Mts., heat transport by fluids during late Cretaceous regional metamorphism. 88M/1462; borderland basins, benthic fluxes, cycling of biogenic silica and C in, 88M/0837; Catalina schist, metasomatism, partial melting in subduction complex, 88M/1402; Cazadero, amphiboles from Franciscan jadeite-glaucophane type facies parageneses, metabasites, compns.. 88M/0993; Cazadero, Ward Creek metabasites, clinopyroxene, textural evolution, compositional variation in, Coast Range, CO2-rich 88M/2558; travertine depositing spring, chem., mineralogy, 88M/4049; Copley-Balaklala series, geochem., deep layers of Palaeozoic arc, 88M/3975; Darwin polymetallic skarn dist., contrasting skarn types, intrusive, calcsilicate compositional data used to distinguish, 88M/1870; Death Valley region, Amargosa River valley, clay-hill nitrate deposits, chem., mineralogy, origin, 88M/6352; Devils Elbow ophiolite, and overlying Galice fm., new constraints on Jurassic evolution of Klamath Mts., 88M/6304; Franciscan complex, alkaline, transitional subalkaline metabasalts, geol., geochem., 88M/4425; Great Valley, origin of N-rich natural gases, evidence from He, C, N isotope ratios, 88M/5526; Kings River ophiolite, Nd-Sr-Pb systematics, age, implications for depleted mantle evolution, 88M/0749; Klamath Mts., isotopic heterogeneity in tilted plutonic system, 88M/0748; Pit fm., olistostromes, problems of recognition, 88M/1445; Sawyers Bar area, mafic meta-igneous arc rocks of komatiitic affinities, 88M/1216; Klamath Mts., Wooley Creek batholith, Slinkard pluton, mineralogy, 88M/2878; Land Management Wilderness Study Areas, Indian Pass and Picacho Peak Bureau, geochem. reconnaissance studies, 88M/0892; Mesa Grande, Himalaya mine, tourmaline, famous source, 88M/2100; Mono Lake, radiocarbon budget, unsolved mystery, 88M/5343; sources, flux of natural gases, 88M/4165; Mt. Shasta, Fe-Ti oxide mineralogy and origin of normal, reverse remanent magnetization in dacitic pumice blocks, 88M/1540; New Idria mining dist., Hg ores, geochem., stable isotope studies, 88M/0670; Peach Springs Tuff, heavy-min. suites confirm wide extent, 88M/2917; Point Sal ophiolite, compositional, structl. variations of phyllosilicates, 88M/6032; Punchbowl fault, composite planar fabric of gouge, 88M/2720; Salton Sea geothermal field, authigenic anatase and titanite in shales, 88M/2612; metamorphosed Plio-Pleistocene evaporites and origins of hypersaline brines, fluid inclusion evidence, 88M/5545; microstructs., formation mechanisms, depth-zoning of phyllosilicates in geothermally altered shales, 88M/6373; saline brines and metallogenesis in modern sediment-filled rift, 88M/5789; Salton Sea,

U-Th series radionuclides in brines and reservoir rocks from boreholes, 88M/1983; REE-bearing Benito County, vesuvianite, crystal struct., 88M/0245; Santa Cruz, Kalkar quarry, mineralogy, 88M/3168; Santa Monica Basin, budgets, behaviours of U, Th series isotopes in sediments, 88M/0794; Co, Cu distribn. in waters, 88M/5843; Searles Lake, diagenetic alteration of silicic ash, 88M/4674; Sierra Nevada, composite Devonian island-arc batholith, 88M/6220; granite, origin, evidence from small scale composite dykes, 88M/1293; Lamarck granodiorite, fluid, chem., phys. constraints on mafic-felsic magma interaction in, 88M/4532; Sierra Nevada, Smartville intrusive complex, core of rifted volcanic arc, 88M/4621; Skookum Gulch, condns. of metamorphism in early Palaeozoic blueschist, 88M/1505; The Geysers, As, Sb, B concentrations in steam, steam condensate, 88M/0747

-, COLORADO, Fe-deficient olivine struct. mins., occurrence, 88M/4241; kimberlite-transported nodules, enrichment of lithosphere, 88M/4418; W-central, geochem., petrogenesis of early Proterozoic amphibolites, 88M/6429; Boulder County, epidote phenocrysts in dacitic dykes, 88M/0980; Climax, Ceresco Ridge, porphyry molybdenite deposit, Mo behaviour during weathering, comparison with Hollister deposit, N. Carolina, 88M/3912; Colorado Plateau, U province, geol., 88M/5174; Cripple Creek dist., geochem. textural, Cresson mine, characteristics of gold mineralization, 88M/5293; Denver, envtl. influences on Hg, Rn, He concns. in soil gases, 88M/4180; Fremont County, Wet Mts., flecked gneisses, petrol., 88M/6430; Front Range, Al chem.: fractionation, speciation, min. equilibria of soil interstitial waters, 88M/0223; Grizzly Peak tuff, compositional layers in zoned magma chamber, 88M/1358; Larimer County, Crystal Mt. dist., pegmatite, mins. from, 88M/4834; Mineral Belt, Mo distribn. in Precambrian rocks, comments, 88M/3857, reply, 88M/3858: Ouray County, Grizzly Bear mine, mins. of, 88M/4835; Rio Grande rift, chem., isotopic evidence for lithospheric thinning beneath, 88M/5673; Royal Tiger mine, biogeochem. prospecting, temporal variation of metal concentrations, 88M/0919; temporal variation of metal concentrations in biogeochem. samples, 88M/2506; Silverton caldera, sericite, correlation among struct., compn., origin, particle thickness, 88M/2581; Thirtynine Mile volcanic field, volcanic source rocks for U in epigenetic deposits, 88M/2189; Wet Mts., REE, min. changes in Holocene soil. stream sediments, 88M/5742

- —, CONNECTICUT, Avalon terrain, U/Pb dating, geol. evidence for Late Palaeozoic anatexis, deformation, accretion, 88M/1655; Bronson Hill anticlinorium, Killingworth dome rocks, petrochem., origin, 88M/1503
- —, DELAWARE, seasonal cycling of S, Fe in porewaters of salt marsh, 88M/5841;

- temporal variations of sedimentary S in salt marsh, 88M/5739
- —, FLORIDA, clay min. relationships in Haplaquods, 88M/1778; clay mineralogy related to morphol. of soils with sandy epipedons, 88M/5062; Floridan aquifer, characterization of dolomitic rocks from coastal mixing zone, 88M/4672; Miami Limestone, Pleistocene, fluid inclusions in vadose cements, petrogr., 88M/5542; off coast of Apalachicola River Delta, heavy min. reconnaissance, 88M/6351; The Everglades, early diagenesis of organic matter in sawgrass peat, 88M/2451
- —, GEORGIA, Augusta fault zone, kinematic history of mylonitic rocks, 88M/6427; Blue Ridge, amphibolite, petrol., 88M/4757
- -, HAWAII, alkaline volcanism, 88M/2791; constraints on characteristics of magma sources for volcanoes based on noble-gas systematics, 88M/2258; eruptive gases, anals., 88M/1344; exsolved silicate, oxide phases from clinopyroxenes in xenolith, implications for oxidation state of upper mantle, 88M/6205; ferrihydrite, allophane in soils, implications for classification, 88M/5060; manganiferous soil concretion, comment, 88M/0220; petrol., geochem., recent advances, 88M/1342; radiocarbon dating, 88M/1656; REE in soils, 88M/0219; volcanic rocks, stratigraphic framework, 88M/1335; volcanoes and biogeol. of mercury, 88M/2262; xenolith populations, magma supply rates, development of magma chambers, 88M/1332; Haleakala Crater, lavas, isotopic evolution, 88M/2265; Hawaiian Archipelago, ferromanganese crusts, geochem., 88M/0652; Hawaiian hot spot, xenoliths associated with, 88M/2758; mantle Hawaiian islands, constraints from lavas, inclusions, 88M/3019; Hawaiian plume, dynamic geochem., 88M/5664; Hualalai Volcano, geol., petrol., geophys. data, prelim. summary, 88M/1341; Kahoolawe Is., tholeitic, alkalic, unusual hydrothermal(?) 'enrichment' characteristics, 88M/0737; Kaula Island, glass in garnet pyroxenite xenoliths, product of infiltration of host nephelinite, 88M/4533; Kilauea Volcano, age of differentiated lavas. implications from 1955 eruption, 88M/4593; diverse olivine types in lava of 1959 eruption, bearing on eruption dynamics, 88M/1343; early 19th century reticulite pumice, 88M/1340; eruptive history, long-term behaviour, 88M/1337; SO₂ and CO₂ emission rates, 1979–1984, 88M/1345; stratigr., 88M/1336; variation of δ¹³C in fumarolic gases, 88M/2260; Kilauea Iki lava lake, differentiation behaviour, 88M/1219; geothermometry, 88M/4591; Sulphur Bank, He in soil gas, spatial, temporal variations, 88M/2261; E. rift zone, geochem. model, 88M/2263; Kilauea and Mauna Loa, lava, tr. elem. chem., reconnaissance, 88M/2256; C abundances in tholeiite lavas, 1972-1975 eruptions, 88M/2259; Kilauea caldera, intrusive rocks. 88M/1339; Uwekahuna Bluff section, stratigr., petrol., 88M/1338; Kohala
- volcano, Hawi lavas, geochem., 88M/626 Kona, Mauna Loa and Hualalai volcanoes coastal lava flows, petrogr., 88M/4592 above Loihi submarine summit area methane anomalies in sea-water, 88M/2398 Mauna Loa Volcano, 1984 eruption, gases compn., 88M/1346; 1984 lava, rheolog props., 88M/1348; Haleakala, temporal H isotopic variations within volcanoes 88M/3959; Mauna Loa and Kilaue volcanoes, picrites, petrol., 88M/6204 Molokai, Kalaupapa Basalt, age, petrol 88M/0736; West Maui, volcanic rocks origin inferred from Pb, Sr, Nd isotopes multicomponent model for oceanic basalt 88M/2257
- —, IDAHO, Belt basin, Coeur d'Alene, baseprecious-Idaho, metamorphic origin 88M/5607; Boehls Butte area, role or replacement in genesis of anorthosite 88M/2875; tourmaline in anorthosite 88M/6011; Conda mine, alteration stages in phosphate rocks, cathodoluminescence study, 88M/2188; Snake River Plain, Magin Reservoir eruptive centre, origin of hybric ferrolatite, 88M/0744; Thunder Mountain caldera complex, residence of Ag in min deposits, 88M/0663
- ILLINOIS, geol., min. resources 88M/5307; minerals, 88M/6480; mins. of overview, 88M/6478; W, S, subsurface geochem. investigation, pilot study 88M/4179; borehole UPH-3, healed microcrack orientations in granite relationship to rock's stress history 88M/1290; Hardin County, Harris Creek fluorspar dist., mins. of, 88M/6479; Illinois basin, Sr isotopic study of formation waters 88M/5783; Glen Dean fm., tidal, deltaid controls on carbonate platforms, 88M/4671 New Albany Shale, pyrite, C-S-Fe relationships, isotopic compn., 88M/2139
- —, IOWA, W content in soils, and, 88M/5341
 —, KANSAS, serpentinization and origin of F gas in, 88M/3838; Jumbo mine goethite-bearing brine, petroleun inclusions, geochem. condns. of ordeposition, 88M/5541; Riley County, newly discovered kimberlites, characteristics 88M/4427; Shawnee group, Heebner Shall member, XRD min. detn., 88M/4670
- --, KENTUCKY, soils, min. solubility relationships in Fragiudalfs, 88M/1777; W thermodynamic evaluation of amorphous aluminosilicate binding agents in fragipans 88M/1718; variation in pyrite size, form microlithotype assocn. in Springfield (No.9 and Herrin (No.11) coals, 88M/1441 Breathitt fm., marine horizons, depositional anal., tr. elems., stable isotopes, 88M/0790
- —, LOUISIANA, Mississippi Delta contrasting mudflow and distal shel deposits, clay mineralogy, 88M/1767 sedimentary, botanical factors influencing peat accumulation, 88M/4160; Cubits Gal crevasse-splay, clay mineralogy, 88M/5027
- —, MAINE, articles published in Rocks and Minerals —, bibliogr., 88M/6491 gemstones, 88M/3781; geol., 88M/4410 phosphate-rich pegmatite, review 88M/4827; regional geochem. studies

88M/0918; S-central. contrasting mechanisms of fluid flow through adjacent stratigraphic units during regional metamorphism, 88M/5759; SW, skarns, mins. of, 88M/4826; W-central, Devonian, Carboniferous metamorphism, muscovitealmandine geobarometer, staurolite problem, 88M/6422; Boil Mt. ophiolite complex, geochem., tectonic implications, 88M/2275; Catheart Mt., porphyry Cu deposit, white mica geochem., 88M/6029; Cranberry Is., relationship between peat geochem. and depositional 88M/1977; Maine Geol. Survey, history, 88M/6490; Oxford County, four obscure pegmatite min. localities, 88M/4828; Paris, Mt. Mica, unusual, large specimen of elbaite, 88M/4843; St. Croix belt, pre-Silurian stratigr., tectonic significance, 88M/6138; Topsham, topaz, herderite, occurrence, 88M/4830; Topsham, pegmatite dist., mins. of, 88M/4829

- -, MARYLAND, Sykesville dist., compositional zoning in Zn-rich chromite, bearing on origin of 'ferritchromite', 88M/1029
- -, MASSACHUSETTS, Fort River watershed, hydrogeochem. cycling, chem. denudation, appraisal of mass-balance studies, 88M/5840; Monson gneiss and Ammonoosuc and Partridge volcanics, amphibolites, comparative petrol., 88M/4756; New Salem area, systematic retrograde metamorphism of sillimanite-staurolite schists, 88M/1502
- -, MICHIGAN, fine clay mineralogy of soil matrices, clay films in two hydrosequences, 88M/3432; N, regional heat flow variations 88M/4779; Keweenaw Peninsula, saline minewaters, nature, origin, relation to similar deep waters in Precambrian crystalline rocks of Canadian Shield, 88M/0834; Michigan and Appalachian Basins, brines, Sr, O, H isotopic compn., 88M/5784; Upper Peninsula, Portage Lake volcanics, palaeomagnetism, age of Cumineralization, 88M/6460
- -, MINNESOTA, high-charge beidellite, occurrence, 88M/1751; Pb, Nd isotope, tr. elem. constraints on origin of basic rocks in Proterozoic igneous complex, 88M/3969; Duluth complex, re-equilibration of olivine with trapped liquid, 88M/1291; Babbit Cu-Ni deposit, melt-country rock interaction, S, O studies, 88M/0661; Kenora-Kabetogama dyke swarm, Proterozoic, characteristics, 88M/3968
- -, MISSISSIPPI, Norphlet fm., diagenesis of æolian and fluvial feldspathic sandstones, 88M/4669; Salt Dome basin, metal-rich brines, geochem., 88M/5788
- -, MISSOURI, recognition of Proterozoic cauldron boundary, 88M/6141; Madison County, use of factor anal. to differentiate pollutants from other tr. metals in soils of mineralized area, 88M/0421; Missouri, baryte deposits, geol., geochem. controls of mineralization, 88M/0664
- MONTANA, crustal evolution, Archaean-Proterozoic transition, evidence from geochem. of metasedimentary rocks,

comment, 88M/5761, comment, 88M/5762, reply, 88M/5763; philipsburgite, IR spectra. 88M/6078; N-central, mineralized intrusive complexes, studies, 88M/0361; S-central, pedogenic replacement of aluminosilicate grains by CaCO₃ in soils, 88M/5061; Absaroka Mts., Independence volcanic suite, Cretaceous, petrol., geochem., clues to Archaean mantle compn., 88M/0743; Belt basin, Coeur d'Alene, base-, precious-metal veins, metamorphic origin, 88M/5607; Bitterroot dome, transition amphibolite-facies mylonite to chloritic breccia, role of mylonite in formation of Eocene epizonal plutons, 88M/6426; Crazy Proterozoic enrichment subcontinental mantle source of igneous rocks, 88M/0742; Daisy Creek Cu-Ag prospect, hinsdalite and other oxidation products, 88M/0662; Sanders County, Pt, Pd in mafic dyke, 88M/5292; Smoky Butte, davanite, K2TiSi6O15, in lamproites, X-ray powder data, 88M/2575; Spar Lake, strata-bound Cu-Ag deposit, genesis, controls inherited from sedimentation and preore diagenesis, 88M/0387; Stillwater complex, compn. of primary postcumulus amphibole and phlogopite within olivine cumulate, 88M/6024; magma evolution, REE evidence for formation of ultramafic series, 88M/2277; Mountain View area, Cu, sulphides, resource assessment, 88M/0388; Stillwater complex, Picket Pin Pt/Pd deposit, investigations, 88M/0389

- , NEVADA, Eureka Co., Gold Quarry deposit, geol., 88M/2481; Rodeo Creek NE and Welches Canyon quadrangles, minor elem. distribn., 88M/0920; Eureka mining dist., geochem. studies, R-mode factor anal., 88M/2487; Golconda allochthon, diagenetic controls on structl, evolution of siliceous sediments, 88M/1182; Lander County, pottsite, new vanadate min., 88M/6095; Pioche-Marysvale igneous belt, Oligocene, Miocene volcanic rocks, stratigr., petrogr., distribn., 88M/6276; Storey, Washoe, Lyon counties, Comstock lode, fluid-min. relations, 88M/5240; White Pine County, micas from metaclastic rocks, chem., stable-isotope data for, 88M/6028; muscovite from aplites, quartz veins, 88M/6027; Garnet Hill, almandinespessartine crystals, occurrence, descripn., 88M/2544; Yucca Mt., diagenetic mins., distribn., chem., 88M/1359
- —, NEW ENGLAND, continental margin, sediments, organic geochem., amino acids, carbohydrates, lignin, 88M/2444, lipids, 88M/2445; Highlandcroft plutonic suite, U-Th-Pb dating, 88M/0040; New England fold belt, plate tectonic model for Carboniferous evolution, 88M/2697
- —, NEW HAMPSHIRE, observations, controls on occurrence of inherited zircon in Concord-type granitic rocks, 88M/2276; regional geochem. studies, 88M/0918; Cardigan pluton, magmatic garnets from Acadian thermal event, 88M/1287
- --, NEW JERSEY, Franklin, franklinfurnaceite, new min., 88M/1089; glaucochroite, (olivine group), CaMnSiO₄,

- compn., occurrence, formation, 88M/0972; Franklin mine, cuprostibite, domeykite, native Cu, Pb, occurrence, 88M/6067; Hudson Highlands, high TiO₂ metadiabase dykes, poss. late Proterozoic rift rocks in New York recess, 88M/6423; Ogdensburg, Sterling Hill, parabrandtite, new min., Mn analogue of talmessite, 88M/1096
- —, NEW MEXICO, central mining dist., Groundhog mine, skarn zonation, fluid evolution, 88M/0391; Kilbourne Hole, sulphide assemblages in xenoliths, interpn., 88M/4415; upper mantle beneath young continental rift, isotopic, tr. elem. compn., 88M/3973; Salado fm., model for evolution of brines in salt, 88M/5544; San Juan Basin, Kirtland Shale, Ojo Alamo Sandstone, Cretaceous—Tertiary boundary, sedimentol., sandstone petrogr., 88M/1446; Valles caldera, Mo mineralization in active geothermal system, 88M/3913; White Sands, early diagenesis of æolian dune, interdune-sands, 88M/6354
- , NEW YORK, peat mining, comparison of bulk and elutriate test data, leachability of selected tr. elems., 88M/1978; Adirondack Mts., two-pyroxene graphical thermometers, application to meta-igneous pyroxenes, exptl. study, 88M/2067; High Peaks region, pyroxene exsolution, indicator of high-P igneous crystallization of quartz syenite gneiss, 88M/6015; Adirondack Mts., Marcy anorthosite massif, contamination of. petrol., isotopic evidence, 88M/5670; Chazy group, Middle Ordovician carbonate rocks, palaeo-depth of burial, 88M/4668; Cherry Valley, carbonate sequence, burial history, 88M/4048; Hudson Highlands, high TiO2 metadiabase dykes, poss. late Proterozoic rift rocks in New York recess, 88M/6423; Johnsburg, Adirondack Mts., rare mins, of, 88M/4832; St. Lawrence County, Grenville complex, significance of tourmaline-rich rocks, 88M/2704
- -, NORTH CAROLINA, continental shelf, potential for marine mining of phosphate, 88M/1933; S Appalachians, central deformation, Alleghanian Piedmont. metamorphism, granite emplacement, 88M/4915; Buncombe County, Newfound Gap, small ultrabasic body, geophys. study, 88M/6216; Cape Lookout biogeochem. cycling in organic-rich coastal marine basin, S isotopic budget balanced by differential diffusion across sediment-water interface, 88M/0415, S mass balance, O uptake, sulphide retention, 88M/0414, sedimentary N, P budgets, 88M/0412, temporal, spatial variations in sulphate reduction rates, 88M/0413; Foote mine, monazite, calcioancylite, occurrence, anals., 88M/2655; neotocite, occurrence, 88M/2567; Hollister quadrangle, transition from Eastern Slate belt to Raleigh belt, 88M/6140
- —, NORTH DAKOTA, evaporite mineralogy, groundwater chem. assoc. with saline soils, 88M/3434
- ---, OHIO, coals, anals., 88M/5740; organic geochem. and oil-source correlations in Palaeozoic rocks, 88M/4156; W,

supplemental core investigations for high-Ca limestones, 88M/5308; Ashtabula, Hg pollution, re-examination, 88M/0407; Cuyahoga County, glacial, surficial geol., 88M/5026; Salina group, celestite replacements of evaporites, 88M/3006

—, OKLAHOMA, Glen Mts. layered complex, Rb-Sr, Sm-Nd isotopic study, initiation of rifting within S. Oklahoma aulacogen, 88M/5672

- —, OREGON, clay mineralogical, chem. props. of Andisols, 88M/3435; Blue Mts., Permo-Triassic island arc tholeitic volcanism, petrol., 88M/6305; Crater Lake Caldera, lithic breccia, ignimbrite, erupted during collapse, 6845 yr B.P., 88M/1357; Mt. Mazama, zoned calcalkaline magma chamber, compositional evolution, 88M/5674; Newberry Volcano, mins., fluids from, isotope geochem., 88M/0745; W. Cascades, magmatism, mineralization, 88M/5238
- -, PENNSYLVANIA, atmospheric chems. deposited on mountain top peat bog, historical perspective, 88M/1980; mins. from, 88M/1585; NE, NH₄-bearing illite in very low grade metamorphic rocks assoc. with coal, 88M/0183; Cedar Hill, nakauriite, new blue min., 88M/1584; Danville-Bloomsburg area, Clinton, iron-ore mines, geol., history, present-day envtl. effects, 88M/0420; Ecton mine, occurrence, 88M/2637; ramsbeckite, Lancaster County, Cedar Hill Quarry, nakauriite, new occurrence, 88M/1061; Phoenixville. Brookdale pyromorphite, occurrence, descriptn., 88M/1583
- -, SOUTH CAROLINA, Augusta fault zone, kinematic history of mylonitic rocks, 88M/6427; Carolina slate metavolcanic rocks, U/Pb, Th/Pb 88M/3251; whole-rock isochrons, Columbia, University of South Carolina, McKissick Museum, geol.' collection, 88M/6489; Hammett Grove, meta-igneous suite, chem. characteristics, 88M/6303; Liberty Hill pluton, evolution of magmatic AFM min. assemblages in granitic rocks, 88M/2876
- -, SOUTH DAKOTA, Black Hills, Edison holmquistite-bearing pegmatite, amphibolite, pegmatite-wallrock interaction, 88M/6025; Tip Top Mine, phosphate mins., descriptns., 88M/2654; Bob Ingersoll pegmatite, REE contents of tourmaline from, 88M/2130; Cheyenne River arm of Lake Oahe, effect of mining on sediment-tr. elem. geochem. of cores, 88M/5340; Elk Creek, famous min. locality, baryte crystals, descriptn., 88M/2636; Keystone, Etta mine, cuprocassiterite discredited as mushistonite, and unnamed tin min., 88M/2622; Tip Top pegmatite, pahasapite, new beryllophosphate zeolite, 88M/2664
- —, TENNESSEE, E, fluid inclusion chem. in exploration for Mississippi Valley-type deposits, 88M/2504; E, and Pine Point, chem. evolution of brines during Mississippi Valley-type mineralization, 88M/0665; Ducktown, Cherokee mine, ore

metamorphism, pyrite porphyroblast development, 88M/0390

- -, TEXAS, clinoptilolite in soils, 88M/1014; characterization of U in lignite, 88M/5608; Balcones province, Cretaceous nephelinite to phonolite magmatism, 88M/4433; Big Bend National Park, Slickrock Mt. intrusive complex, petrogenesis, 88M/4434; Franklin Mts., Proterozoic volcanic rocks and assoc. Sn-bearing granites, geochem., Sr, Nd isotopic constraints on origin, 88M/0746; Gulf Coast, authigenesis of kaolinite, chlorite, 88M/0187; Gulf Coast, Frio fm., regional variations in formation water chem., 88M/4116; Houston, Houston Museum of Natural Science, Perkins and Ann Sams min. collection, 88M/6487; Hudspeth County, Sierra Blanca Peaks, cryolite-bearing, rare metal-enriched rhyolite, 88M/3970; Jackson group, kaolinite, opal-CT, clinoptilolite in altered tuffs interbedded with lignite, 88M/1442; Leuders fm., siliciclastic grain breakage, displacement due to carbonate crystal growth, 88M/3007; Llano County, Llano rhyolite, origin, significance of blue coloration in quartz from, 88M/6044; Palo Duro basin, deep-basin brines, geochem., hydrodynamics, 88M/5782; fibres, cylinders of cryptomelane-hollandite in Permian bedded salt, 88M/4301; Rolling Plains, micromorphic record, interpns. of carbonate forms in soils, 88M/3436; Texas Gulf, Ra, Rn in water supplies from coastal aquifer, 88M/3624; Trans-Pecos, alkalic rocks of contrasting tectonic settings, 88M/4436; Tertiary alkaline magmatism, 88M/2801; Infiernito caldera, chem., thermal zonation in alkaline magma system, 88M/6278; Trans-Pecos magmatic province, and Pacific Ocean, Clarion Is., geochem. comparison of alkaline volcanism in oceanic, continental settings, 88M/4435; Tertiary alkaline rocks, geochem., 88M/2278; Wilcox sandstones, Eocene, diagenetic history, comment, 88M/4673
- -, UTAH, Bingham, hydrothermal solutions, chem., isotopic evolution, 88M/0668; Colorado Plateau, min. reactions in xenoliths, implications for lower crustal condns., fluid compn., 88M/1125; Henry Mts., laccolith-stock controversy, new results, 88M/6218; Lisbon Valley formation of carbonate-sulphate veins assoc, with Cu ore deposits from saline basin brines, fluid inclusion, isotopic evidence, 88M/0364; Madison group overthrust belt, dolomitization, 88M/0789; Marysvale volcanic field. Mt. Belknap Volcanics, Joe Lott tuff, petrol., chem., 88M/6277; Phosphoria fm., effects of weathering on biol. marker, aromatic hydrocarbon compn. of organic matter in shale, 88M/2448
- —, VERMONT, regional geochem. studies, 88M/0918; Mt. Ascutney, magmatic complex, petrogenesis, 88M/5671
- —, VIRGINIA, min. locality index, 88M/6476; tr. elem. distribn. in soils above deeply weathered pegmatites, implications for exploration, 88M/0785; Briery Creek Triassic basin, geol., 88M/6349;

Conococheague fm., relationships of roc cleavage fabrics to incremental an accumulated strain, 88M/1181; Fallin Spring Creek, CO₂ outgassing, calciprecipitation in, 88M/0833; Highlam County, brucite-rich marble, occurrence descriptn., 88M/6371; Lexington, Barger quarry, pyrite and other mins., occurrence 88M/6477; Willis Mt., trolleite and assomins. in kyanite quartzite, 88M/6080

- -, WASHINGTON, cycling of fallow natural radionuclides in continental slop sediments, 88M/0405; geochem. of water near surficial organic-rich U deposii 88M/0836; long-chain n-aldehydes i sediments, geochem. study 88M/0857; along outer coast, evidence for great Holocene earthquakes, 88M/1592; NE response of Douglas fir to uraniferou groundwater, 88M/4178; N Cascades ultrabasic rocks of fracture-zone ophiolite 88M/4620; W Cascades, magmatism mineralization, 88M/5238; Columbia River estuary, tr. metals in, following 18 Ma-1980 eruption of Mt. St Helens, 88M/0835 Deer Trail, Zn-Pb-Ag vein deposits genesis, fluid inclusion, stable-isotope studies, 88M/2187; Grande Ronde basali Cohassett flow, two-stage vesiculation 88M/4600; Mason County, Robertson Pit Crescent fm., mins. of, 88M/4833; Mt. St Helens volcano, 1982 eruption, crystal clot in pumice, petrol., significant role of Fe-T oxide crystallization, 88M/4598; burial o trees by volcanic eruptions, implications fo interpn. of fossil forests, 88M/1438; chem of ash and leachates from May 18, 1986 eruption, 88M/6275; computation o volcanic hazard maps for tephra fallout 88M/4597; crystallization of 1980-1986 dacite, quantitative textl. approach 88M/6274; generation of pyroclastic flow by hot-rock avalanches from dome 88M/4596; laser-interference, Nomarsk interference imaging of zoning profiles in plagioclase phenocrysts from May 18, 198 eruption, 88M/4277; secondary hydro eruptions in pyroclastic flow deposits 88M/1354; stratified flow in pyroclasti surges, 88M/1355; Mt. St. Helens trioctahedral vermiculite in 1980 pyroclasti flow, 88M/0184; Okanogan gneiss dome metamorphic core complex, 88M/6428 Puget Sound, Ag, Hg, Pb, Cu, Cd distribr in sediments, 88M/1982; factors affectin pore water hydrocarbon concentrations i sediments, 88M/0416
- —, WISCONSIN, Wausau complex Proterozoic sanidine, microcline, i pegmatite, 88M/1811
- —, WYOMING, alum mins., report 88M/1950; ballast, report, 88M/1949 density, compressibility of bentonit particles, 88M/4976; diatomite, 88M/1936 evidence for inverted metamorphic gradier assoc. with Precambrian suture, 88M/4758 geol., occurrence of critical strategic metals 88M/3563; new Cretaceous—Tertiar boundary clay site, 88M/4238; potas resources, 88M/1935; pumice, scorie pumicite, report, 88M/1947; REE, N

occurrence, 88M/3848; sinter, travertine, resources, report, 88M/1948; sulphur resources, 88M/1941; Albany County, Plumbago Creek, sandstone deposit, silica resources of, 88M/5309; Beartooth mts... Archaean igneous rocks, Pb, Sr, Nd isotopic compns., implications for crust-mantle evolution, 88M/3974; Green River basin, carbonate diagenesis in nonmarine rocks, O isotope model for interpn. of, 88M/0787; Hanna fm., resinite macerals from coals, fluorescence spectral anal., 88M/1440; Laramie anorthosite complex, geothermometry of exsolved augites from. 88M/0987; Madison group overthrust belt, dolomitization, 88M/0789; Niobrara County, Manville, high-Ca and dolomitic limestones, geol., economic potential of, 88M/3611; Sweetwater County, Fort LaClede deposit, Na, Ca, ammonium exchange on clinoptilolite, 88M/3384; Wind Range, Medina Mtn. area, development of Archaean crust, 88M/4759; Yellowstone National Park, dachiardite, occurrence, anals., 88M/4282; Th-U disequilibrium in geothermal discharge zone, 88M/0811; Yellostone caldera, deformation, 88M/1360

Uraniferous mineralization, France, Haute Vienne, Bernardan, in episyenite, occurrence of Ce in, 88M/0629

Uraninite, and U roll-front ores, dissolution rate, 88M/0495; hydrothermal solubility of, 88M/5414; natural, isotopic disequilibrium effects in leaching of, 88M/2137; *REE* distribns. in, implications for ore genesis, 88M/2136; *Pakistan*, unit cell dimensions, 88M/2611

— mineralization, in Middle Proterozoic pegmatite granites, 88M/2165

—, pitchblende, application of Xe isotopes for dating, 88M/3192

Uranium, adsorption from groundwater by common fracture secondary mins., 88M/2185; alterations of organic matter, clue for U ore genesis, 88M/2449; applications of U-Th-Pb systematics to investigations of U source behaviour during rocks, 88M/2285; formation, diagenetic alteration of silicic volcaniclastic sediments, 88M/3842; behaviour in crystallizing magma, 88M/0688; distribn. in mins. of fergusonite-bearing carbonatites, 88M/3866; distribn, in space, time, 88M/2117; forms taken by U in rocks, quantitative anal., 88M/0057; in oceanic crust, 88M/0692; in process of modern phosphorite formation, 88M/4029; in situ exptl. bag method to study influence of envtl. factors on U mobilization, preconcentration in soils, 88M/2511; mobility in non-oxidizing brines, field, exptl. evidence, 88M/2357; rates of removal of U from igneous rocks, U-leach model, applicability to min. separates, 88M/1971, applicability to data, 88M/1970; whole-rock marine basin, behaviour in anoxic 88M/2402; U concentration detn. in soils, stream sediment, using high resolution energy-dispersive XRF analyser, 88M/1697;

U series disequilibria as means to study transport mechanism of U in sandstone samples during weathering, 88M/2300; Atlantic, Amazon shelf, U geochem., evidence for U release from bottom sediments, 88M/2401; N. Atlantic, Gt. Meteor East, S Nares Abyssal Plain, in pore-waters from sediments, 88M/4080; off E. Australia, sea-floor weathering of phosphate nodules, effect on U oxidation state, isotopic compn., 88M/2321; South Australia, Beverley deposit, accretionary migration of U in Tertiary sandstones, TL evidence, 88M/2322; Baltic Sea, dissolved, anals., 88M/2383; Belgium, distribn. in Devonian shales, sandstones, computerized measurement chain of non-destructive gamma spectrometry, 88M/4016; Ardennes, Oizy area, concentration mechanisms in mineralized fractures, 88M/2151; Neufchâteau syncline, syngenetic U concentration in black shales, 88M/3873; Canada, British Columbia, application of regional geochem, reconnaissance data for in surface waters to identifying environmentally sensitive areas, 88M/0408; Ontario, Great Lakes region, Thames River, U budget, partitioning between dissolved and microorganism components, 88M/2399; Quebec and Labrador, Circum-Ungava belt, new information, 88M/1893; Saskatchewan, Cypress Hills, in surface rocks, stream sediments, 88M/2333; Athabasca Basin, geochem. signatures of U deposition, 88M/2334; France, Pyrenees, Gouffre de la Pierre-Saint-Martin, high U content in, stalagmites, 88M/4020; Ireland, Gortdrum, genesis, mineralogy, geochem. of U in stratiform Cu deposit, 88M/3573; Israel, distribn. in iron veins, 88M/2138; Timna Basin, in Mn and phosphorite assemblages, genesis of, 88M/0634; Mali, Kenieko, behaviour in ferrallitic envts., 88M/2303; USA, Colorado, Thirtynine Mile volcanic field, volcanic source rocks for U in epigenetic deposits, 88M/2189

deposits, albitite-hosted, occurrence, characterization, 88M/3522; fluid inclusions related to, review, 88M/2145; formation of, 88M/5168; in black shales, model for genesis of, 88M/3888; radiolysis evidence by H₂O-O₂ and H₂-bearing fluid inclusions in, 88M/5605; U isotopic disequilibrium in groundwater as indicator of anomalies, 88M/2458; Australia, groundwater geochem., applications to, 88M/2392; Northern Territory, S. Alligator Valley, U-Au, epigenetic sandstone-type deposit hosted by debris-flow conglomerate, Pine Creek geosyncline, 88M/1926; 88M/5177; Queensland, Mary Kathleen, U-REE, geol., genesis, 88M/5281; Canada, Athabasca Basin, deeply unconformity-type, near-surface lithogeochem. halo as aid to discovery, 88M/0868; geol., genesis, 88M/5171; Elliot Lake and Athabasca, regional geophys., geochem., 88M/5173; Ontario, Blind River-Elliot Lake basin, geol., genesis in early Proterozoic, 88M/5172; China, Yingtang fm., hydrothermal superimposition, transformation ore-forming processes, geol. features, 88M/5257; S China, carbonate-type, organic matter and relation with U mineralization in, 88M/5590; in granitic rocks, H, O, S, Pb isotope studies, 88M/5588; France, Massif Central, Limagnes, formation processes in Tertiary sediments, 88M/2152; USA, Texas, carbonaceous, modes of occurrence of U in, 88M/5608; Washington, surficial organic-rich, geochem. of water near, 88M/0836

exploration, Australia, Northern Territory,
 Pine Creek geosyncline, assessment of stable Pb isotope measurements for,
 88M/2468

 isotopes, United Kingdom, behaviour with salinity change in three estuaries, 88M/2373

mineralization, role of contact metamorphism in producing, 88M/2342; South Australia, 'West Coast area', in Tertiary palaeochannels, 88M/5217; Brazil, Bahia, Lagoa Real, U/Pb, Rb/Sr, Sm/Nd chronol., 88M/4918; China, N. margin of N. China Diwa, tectonic activation, 88M/1866; Italy, Novazza and Val Vedello, assoc. with evolution of Permo-Carboniferous volcanic field, 88M/2217

minerals, laser sampling in isotope studies on, 88M/4953; Canada, Quebec, Otish and Mistassini Basins, hydrated, as clues on Archaean weathering processes, 88M/0593; Israel, Judean Desert and N. Negev, secondary, occurrence, 88M/2649; Switzerland, Kanton St. Gallen, Weisstannental, in Lower Permian lapilliagglomerate tuff, 88M/1911

— ores, Cl, I isotope study, discussion of AMS measurements, 88M/3907; epigenetic, new data on formation mechanism, based on EM studies, 88M/0292; I, Cl in, prepn. of samples for AMS anal., 88M/3289; Spain, in metasedimentary rocks, 88M/3530

 — placer mineralization, South Africa, pre-Witwatersrand basement, granitic rocks, clues to source of, 88M/5176

— provinces, and mantle anomalies, 88M/5169; granites as indicators of, 88M/5170; recognition of, (book), 88M/4970; U cycle, 88M/5167; Western Australia, Yilgarn Block and Gascoyne Province, geol., 88M/5179; Brazil, identification of, 88M/5182; S. Greenland, characteristics of, 88M/5180; India, Singhbhum, characterization, genesis, 88M/5181; USA, Colorado Plateau, geol., 88M/5174

— series dating *v*. age determination Uranophane, crystal struct., 88M/5117 Uranopyrochlore, *Italy, Latium*, occurrence, 88M/1576

Uranothorianite v. thorianite

Vanadium, direct electrochem. detn. of dissolved V in sea-water by cathodic stripping voltammetry, 88M/1686; effects of O fugacity on ratio between valency forms of V in magmas, 88M/2200; in steels and mins., spectrophotometric detn. of, 88M/4938; inorganic, thermodynamic solubility relationships of, in marine envt.,

- 88M/5767; role for *Amanita muscaria* L. in circulation of, in non-polluted woodland, 88M/3622; *India*, in coals, 88M/5716; *Mediterranean Sea*, behaviour in global ocean and, 88M/2381
- Vanalite, USSR, Kazakhstan, Karatau, from carbonaceous-siliceous V-bearing formations. 88M/1038
- Vantasselite, Belgium, Stavelot Massif, new min., 88M/2666
- Variolites, USSR, Karelia, Yalguba, heavy metals, S, in, 88M/2233
- Vashegyite, Belgium, Namur province, Haut-le-Wastia, occurrence, anals., 88M/4334
- Vaugnerite, France, Velay dome, orthopyroxene-bearing, petrogr., geochem., min. characteristics, genesis, 88M/6166
- VENEZUELA, laterite, VL-1, standard ref. material, statistical parameters for tr. elems., 88M/2510; SE, geochem. of ferruginous bauxite profile, 88M/5609
- Vermiculite v. clay minerals
- Vesuvianite, Mg-rich, high-resolution solid-state ²⁷Al NMR spectroscopy, 88M/3453; USA, California, San Benito County, REE-bearing, crystal struct., 88M/0245; SW Maine, in skarns, 88M/4826
- Vinciennite, Canada, British Columbia, Maggie, in porphyry Cu deposit, 88M/1054 Vitrinite v. coal
- Vivianite, vibrational modes related to water molecules, IR spectroscopy, 88M/1838; Finland, Tuusniemi, Paakkila, occurrence, anals., 88M/2652; South Africa, Clarens, in late Pleistocene swamp deposits, 88M/1075 Vlasovite, powder X-ray data, 88M/3454
- Volatiles, measurement of, in whole-rock anal., review of use of loss on ignition as, 88M/4928
- Volcanic activity, triggers of explosive processes suggested by volatile distribn. in pyroclastic products, 88M/4541
- arcs, USA, California, Sierra Nevada, Smartville intrusive complex, core of, 88M/4621
- ash, in temperate, tropical regions, origin of cristobalite in soils derived from, 88M/1752; Philippine Sea, Mariana arc, Parece Vela Basin, geochem. evidence for sundering in Miocene ash, 88M/2253; USA, Washington, Mt. St. Helens, and leachates from May 18, 1980 eruption, chem., 88M/6275
- centre, Yemen Arab Republic, Al Mukha, Jabal an Nar, Upper Miocene, 88M/1316
- complex, Nicaragua, San Cristobal, geol., 88M/2928
- cones, Papua New Guinea, Ritter volcano, large-scale collapse, 1888 slope failure, 88M/4585
- eruptions, activity report of Japanese Group for chem. prediction of, 88M/4540; eruption columns, fluid dynamics, thermodynamics of, 88M/6227; Hawaiian, Strombolian, lab. models, 88M/4542; major, global surface-T responses to, 88M/4535; prediction method, 88M/6229; rare gas systematics as tool in study of eruption precursors, 88M/4537; Canary Islands, Tenerife, history, petrol., geochem., 88M/6236; USA, Washington,

- Mt. St. Helens, burial of trees by, implications for interpn. of fossil forests, 88M/1438
- field, Mexico, Michoacán–Guanajuato, struct., 88M/2919
- gases, recent gas discharges, effects of hydrothermal processes on chem., 88M/4538; USA, Hawaii, anals., 88M/1344; Hawaii, Kilauea Volcano, SO₂ and CO₂ emission rates, 1979–1984, 88M/1345; Mauna Loa Volcano, 1984 eruption, compn., 88M/1346
- glass, detn. of water in, by Karl-Fischer titration, 88M/4931; Antarctica; Mt. Erebus, occurrence with Ca-rich anorthoclase, 88M/3470; Canada, Ontario, Michipicoten Is., Precambrian, anals., 88M/6269; Japan, Lake Biwa, in deep drilling core, identification, correlation of volcanic ash layer by EDX spectrometry of, 88M/2907
- hazards, New Zealand, hazards assessment, (book), 88M/0108; Taupo volcanic zone, Ruapehu composite volcano, assessment, 88M/4586; USA, Washington, Mt. St. Helens, computation of volcanic hazard maps for tephra fallout, 88M/4597
- pipes, vesicles, alternate model for origin, 88M/4543
- provinces, E. Australia, Cainozoic, petrol., chem., 88M/5210
- rocks, and alteration mins., TL dating, application to geothermal history, 88M/1632; boundaries from exptl. petrol., 88M/4461; classification based on TAS diagram, 88M/2192; cluster anal., application to, 88M/2239; continental rift-zone, Th isotope compn. in, 88M/0718; Expert System for tectonic characterization, 88M/0675; methods for study of struct. of pore space in, 88M/3149; recent, isotope variations in, tr.-elem. perspective, 88M/3017; very low-grade metamorphism of, min. assemblages, min. facies, 88M/4677; young, Be systematics in, implications for ¹⁰Be*, 88M/3915; young, systematics of Li abundances in, 88M/0696; Aegean island arc, Cainozoic, petrogenesis, 88M/0682; Atlantic Ocean, Fernando de Noronha, isotopic geochem., 88M/5620; Australia, New South Wales, Coombadiha, Hianana, remnants of late Permian tuff ring. lava flow, 88M/6251; Queensland, North Arm, Triassic, epithermal mineralization, alteration, 88M/5215; Bulgaria, quartzadularized, Mo in, mode of occurrence, 88M/0717; Canada, British Columbia, Kingsvale, mid-Cretaceous, 88M/2915; Lake Superior, Michipicoten Is., palaeomagnetism, U-Pb geochronol., calibration of Keweenawan polar wander track, 88M/2871; Quebec, Richmond area, Tibbit Hill, tectonic significance, geochem. evidence, 88M/2269; Thetford Mines complex, Lac de l'Est, ophiolitic, geochem., petrogenesis, 88M/2955; Central America, CENTAM, data base of, 88M/2918; NE China, Cainozoic, geochronol., 88M/3234; Ecuador, pre-collision Cretaceous, Palaeogene, geochem., tectonic setting, 88M/3976; SW Egypt and NW Sudan, Triassic and Tertiary, petrol., geochem., age

relations, 88M/1309; France, Chassolle geothermal area, petrol., 88M/4550; Galapagos archipelago, Isla Pinta, geol., petrol., 88M/0752; Greenland, Bontekoe ø, Tertiary, petrogr., chem. anals., 88M/2888; NW Himalayas, Mandi-Darla, geochem., petrogenesis, 88M/3949; India, Jammu and Kashmir, Ladakh, assoc. with ophiolitic mélange, geochem. study, 88M/2945; Rajasthan, Delhi supergroup, structl., stratrigr., chem. characteristics, 88M/6245; Indian Ocean, Funk Seamount, kaersutitebearing xenoliths, megacrysts in, 88M/6292; Italy, Albanides, from ophiolite belts, geochem., 88M/2941; Japan, Hokkaido, Cainozoic, geochem. variation with time, 88M/0681; Kanto, Tertiary, chem. compns., Sr isotopic ratios, 88M/3952; Ryukyu arc, Kikai volcano, bimodal, Sr isotopic relations, 88M/0733; NE Japan arc, Quaternary, geochem., 88M/1392; Korea, Ulreung Is., high-K, plutonic inclusions, olivine in, 88M/4582; Lesser Antilles, crustal contamination vs. subduction zone enrichment, implications for mantle source compns. of, 88M/2279; Mexico, felsic, mid-Tertiary, evidence for origin of, Nd-Sr isotope compn. of lower crustal xenoliths, 88M/6221; Baja California, Cainozoic, geochem., implications for petrogenesis of post-subduction magmas, 88M/0685; Los Azufres geothermal field, geochem., 88M/1364; Sierra Madre Occidental and Mexican Volcanic Belt, synthesis, comparison of geochem., 88M/0750; New Zealand, Canterbury, mid-Cretaceous garnet-bearing, intermediate and silicic, origin, evolution, 88M/0686; Pacific Ocean. Guam, temporal variation of isotope, REE abundances in, implications for evolution of Mariana Arc, 88M/5660; near Hawaiian Ridge, petrol., geochronol., implications for propagation rate of ridge, 88M/2949; Lau Basin, Valu Fa Ridge, compn. of back-arc basin, evidence for slab-derived component in mantle source, 88M/0684; N Marianas Is., O, S, Sr, Pb isotope variations in, implications for crustal recycling in intra-oceanic arcs, 88M/0735; Mariana Trench, boninite series, petrol., geochem., 88M/5659; Mariana, Yap and Palau trenches, geochem., bearing on tectonomagmatic evolution of Mariana trencharc-backarc system, 88M/2252; New Hebrides back-arc troughs, K/Ar dating, 88M/3243; Raivavae Is., petrogr., geochem. study, 88M/1394; E. Pacific Rise, diversity, spatial zonation, 88M/1398; Papua New Guinea, Woodlark basin, petrol., 88M/6248; W., E. Philippine island arcs, Pb isotopic compns., presence of Dupal isotopic anomaly, 88M/2255; Poland, Low and Opole Silesia, Tertiary, classification, nomenclature, 88M/2899; Sokołowsko, and groundwater, relations between chem. of, 88M/0826; South Africa, Dominion group, Rhenosterhoek fm., late Archaean, geochem., origin, 88M/3946; W Syria, Homs basaltic area, petrol., 88M/4567; Turkey, Akhisar (Manisa) region, Liassic, distribn. of early Mesozoic volcanism around Aegean Sea, 88M/4484; W. Anatolia, Tavşanli-Domaniç (Kütahya), characteristics, significance in Cainozoic volcanism, 88M/4486; between Gelveri and Kikilcin, characteristics, 88M/4568; Central Pontides, Canik, Pliocene, min.petrographic, geochem. investigation, 88M/4566; Söke-Selçuk-Kuşadasi region, geol., petrochem. features, 88M/4569; Yozgat area, major, tr. elem. distribu, in. 88M/3940; USA, Hawaii, stratigraphic framework, 88M/1335; Montana, Independence volcanic suite, Cretaceous, petrol., geochem., clues to Archaean mantle compn., 88M/0743; Texas, Franklin Mts., Proterozoic, and assoc. Sn-bearing granites, geochem., Sr, Nd isotopic constraints on origin, 88M/0746; S. Rocky Mts., Cainozoic, REE compns., 88M/5675; Utah and Nevada, Oligocene, Miocene, stratigr., petrogr., distribn., 88M/6276; USSR, Kamchatka, ultramafic, rare accessory mins. from, 88M/4244; Transbaykalia, and Mongolia, Cainozoic basic, REE and rare elems, in, 88M/5646; Urals, eugeosynclinal, lanthanoid geochem., petrogenesis, 88M/0725; Wales, Snowdonia, Ordovician, finite strain study, implications for regional strain model, 88M/1148

— —, acid, REE geochem. of weathered crust of, exptl. study, 88M/0455; Portugal, Trás-os-Montes, Macedo de Cavaleiros area, peralkaline, Rb-Sr dating, 88M/4612

— —, alkaline, Antarctic Peninsula, geochem., tectonic setting, review, 88M/0687; S Atlantic Ocean, Fernando de Noronha Is., Miocene, Pliocene, 88M/1369; England, Devon, K-rich, Permian, petrogenesis, tectonic setting, geol. significance, 88M/2893; Indonesia, Sunda arc, Batu Tara volcano, K-rich, geochem., petrogenesis, 88M/5653

— —, calc-alkaline, *Spain, Sierra de Gata*, K/Ar ages, geol. setting, 88M/1606

 sequences, Hungary, Lower Permian, geol., tectonic setting, 88M/6241

 suites, Brazil, Paraná basin, bimodal fissural, K-Ar age, Sr isotopes, geochem., 88M/5681

--- systems, uniqueness of, 88M/1347

Volcaniclastic rocks, very low-grade metamorphism of, min. assemblages, min. facies, 88M/4677; Australia, New South Wales, Drake volcanics, late Permian, origin, provenance, 88M/6252; Pacific Ocean, E. Mariana Basin, Cretaceous, primary compn., alteration, origin, 88M/2951

sediments, geochem. of primary, secondary phases in intraplate basalts and, DSDP samples, 88M/2952

Volcanism, continental intra-plate, volcanic rock associations, 88M/4564; shocked mins. at K/T boundary, explosive volcanism as source, 88M/2887; African-Arabian plate, Cainozoic, assoc. with swells, rifts, 88M/2748; S Atlantic, Gough Is., revised stratigr., 88M/4895; E Australia, recent subcrustal, He isotopic evidence for, 88M/3955; Canada, British Columbia, Nicola group, late Triassic, early Jurassic

subduction-related, 88M/6271; Ontario. Michipicoten (Wawa) greenstone belt, late Archaean bimodal, tectonic 88M/2913; Canary Islands, extensional fissural, dyke swarm, implications for · formation of oceanic islands by, 88M/6290; China, Cainozoic, physicochem. processes involved in, 88M/2906; Ecuador and N. Peru, morphol. of Wadati-Benioff 88M/4854; Plio-Quaternary, 88M/3254; France, Armorican Massif, Precambrian. geochem., 88M/0701; Chassolle borehole, chronol., 88M/3211: Massif Central, Tertiary, Quaternary, 88M/2806; Germany, E. Eifel volcanic field, Rothenberg scoria cone, complex strombolian, phreatomagmatic, 88M/6240; Lahn-Dill area, Herbornseelbach, Carboniferous submarine, 88M/4563; S-central Guatemala, Neogene, Quaternary, timing, sources, 88M/2920; Hungary, Buda Mountains, Middle Triassic, petrol., 88M/4565; Indonesia, Sunda-Banda arc, Quaternary, geochem., and three-component genesis of island-arc basaltic magma, 88M/0680; Italy, quiescent, surveillance, precursors of new activity, 88M/4551; Kenya, Turkana, volcanic cycles, magmatic evolution, 88M/4570; Senegal, Cape Verde Peninsula, Tertiary, petrol., 88M/1312; Turkey, between Nigde and Nevsehir, characteristic features, 88M/1313; E Pontides, Jurassic, geotectonics, 88M/4482

—, alkaline, W Africa, Cameroon line, comparison between oceanic and continental, 88M/2794; Pacific Ocean, Clarion Is., and USA, Texas, Trans-Pecos magmatic province, in oceanic, continental settings, geochem. comparison of, 88M/4435; SW Poland, Tertiary, tr., isotope geochem., 88M/2225; USA, Hawaii, 88M/2791

—, andesite, *Hungary, Velence Mts.*, Palaeogene, and assoc. rock alteration, 88M/1306

—, island arc, and mid-ocean ridge, modelled by diapirism from linear source regions, 88M/6281; geochem. study, 88M/5657; USA, Oregon, Blue Mts., Permo-Triassic tholeitic, petrol., 88M/6305

—, rhyolitic, New Zealand, North Island, large scale, at convergent plate boundary, 88M/6258

—, shoshonitic, Australia, New South Wales, Parkes area, Palaeozoic, assoc. with Au-Cu mineralization, 88M/5221

Volcano-sedimentary complexes, palaeovolcanic facies, exhalative geochem., guides for selecting exploration areas in, 88M/0912; Spain, Huelva, Iberian Pyrite Belt, O, H isotopes in, example of water circulation through, 88M/5628

Volcanoes, active, significance of study of, review, 88M/1218; amphibole effect, poss. mechanism for triggering explosive eruptions, 88M/2885; annual contribn. of SO₂ to atmosphere by, 88M/2883; multicomponent crystallization, convection beneath, 88M/2029; nabokoite, atlasovite, new mins. of volcanic exhalations, 88M/1094; output of SO₂, tr. metals, new

approach, 88M/3917; recent activity at Nyiragongo. lava-like occurrences, 88M/2901; residual gravity changes and eruption magnitudes, 88M/2882; seismic energy releases from, 88M/4536; variation of SO₂ emission from, 88M/2884; world volcanic eruptions, 1984, annual report, 88M/1296; S Atlantic Ocean, Tristan da Cunha volcano, dynamic interpn., 88M/4590; Cameroon, Mt. Cameroon, active volcano of Cameroon Line, descriptn., 88M/1311; Canada, British Columbia, Anahim belt, Nazko cone, Quaternary, geol., 88M/6272; Chile, Lascar volcano, active, use of Landsat Thematic Mapper to detect, monitor, 88M/1371; Cainozoic, tectonic China, setting, 88M/6246; Colombia, Nevado del Ruiz, Arenas crater, Italian visit, 1985, results, recommendations, 88M/4604; Costa Rica, Arenal Volcano, xenoliths in basaltic andesite flows, inference of lower crust compn., 88M/1367; Poàs volcano, dynamic model for volcanic activity, 88M/1368; geol. of summit region, spatial, temporal variations among recent lavas, 88M/2925; El Salvador, Izalco volcano, blossite, α -Cu₂²⁺V₂⁵⁺O₇, new fumarolic sublimate, 88M/1083; Germany, E. Eifel volcanic field, Wehr volcano, Quaternary, multiphase evolved eruption centre, 88M/6239; Gough volcano, tectonic, structl. evolution, volcanological model, 88M/2902: Guadeloupe, la Grande Découverte, 3100 and 11 500 yr B.P. eruptions, magma and hydrothermally driven sector collapses, 88M/2929; Guatemala, Santa María, bimodal soda-rich calc-alkalic stratovolcano, 88M/2924; Iceland, chem. surveillance, 88M/4547; Indian Ocean, Kerguelen Is., Mt. Ross, total vol. of magmatic products evaluated, 88M/6267; Indonesia, Krakatau, petrol. evolution, implications for future activity, 88M/2908; Merapi, metallic, non-metallic elems. in high T gases, volatilization, transport, sublimation, 88M/2245; Sunda arc, geochem., isotopic systematics, implications for mantle sources, mantle mixing processes, 88M/2246; Italy, automatic reconstruction of surge deposit thicknesses, applications, 88M/1301; Æolian Archipelago, Salina Is., evidences of surges overtopping topographic barrier, 88M/2896; Campi Flegrei, Monte Nuovo, 1538 eruption, 88M/1303; Lipari and Stromboli, He in soil-gas, 88M/4561; Sicily, Mt. Etna, 1983 lavas, REE, Sr-Nd isotopic compn., 88M/0713; 1984-1985 effusive activity, 88M/6237; 1985 eruption, ground tilt related to volcanological observations, 88M/4555; approach to problems on energy sources based on seismological, volcanological data, 88M/4556; evolution of lava flow-fields, observations of 1981, 1983 eruptions, 88M/1304; identifying diff. regimes in eruptive activity, 88M/4558; recent eruptive activity, 1981-1985, volcanic activity, 88M/4553; seismological precursors, 88M/4554; Sicily Channel, Pantelleria, eruptive history in last

50 k.v. 88M/4552; Stromboli, seismic monitoring of, 88M/4560; Vesuvius, F, Cl distribn, in products of major Plinian eruptions, 88M/0712; Vulcano, seismic monitoring, 88M/4559; Japan, debris deposits, characterization, avalanche polygenetic. 88M/1320: Quaternary long-term eruption rates, dimensions of magma reservoirs beneath, 88M/1323; Miyakejima volcano, October eruption, 88M/1322; Okueyama volcanoplutonic complex. Miocene Valles-type caldera cluster, 88M/1325; Rvukvu arc. Kikai volcano, Sr isotopic relations of bimodal volcanic rocks, 88M/0733; Usu volcano, fracturing assoc, with 1977-1978 eruption revealed by geophys. 88M/4580: measurements. Quaternary peralkaline silicic rocks and caldera petrol., 88M/2796; Lesser Antilles. Martinique. Montagne Peleé volcano. shallow seismicity, 88M/4605; New Zealand, Lyttelton Volcano, Miocene, two centres indicated by trends of radial dykes. 88M/4588; Ruapehu, active composite, facies model for, 88M/6257; Taupo volcanic zone, struct., evolution, economic importance, 88M/6259; Nicaragua and Costa Rica, geochem, of metallic tr. elems. in fumarolic condensates, 88M/2281; Pacific Ocean, Galapagos Is., shield, structl, controls on morphol., 88M/4594; Hawaiian-Emperor volcanic chain, geol. evolution, 88M/1334; Circum-Pacific, and volcanic risk, 88M/6263; Réunion, Grand Brulé area, La Fournaise volcano, borehole, lithostratigr., 88M/1317; Piton de la Fournaise, gravity study of offshore struct., 88M/4576; Uganda, Western Rift, lower crustal granulite xenoliths in carbonatite volcanoes, 88M/1255; USA, Alaska, Aleutian volcanic arc, Yantarni volcano, petrogr., chem., geol. history, 88M/1350; Katmai National Park, Valley of Ten Thousand Smokes, 1912 eruption, rhyolitic, petrol., 88M/4595; Paylof Volcano, eruption characteristics, cycles, relation to regional earthquake activity, 88M/1351; Hawaii, and biogeol. of mercury, 88M/2262; constraints on characteristics of magma sources for based on noble-gas systematics, 88M/2258; Hualalai Volcano, geol., petrol., geophys. data, prelim. summary, 88M/1341; Kilauea Volcano, eruptive history, long-term behaviour, 88M/1337; stratigr., 88M/1336; Kilauea Iki lava lake, differentiation behaviour, 88M/1219; Kilauea, E. rift zone, geochem. model, 88M/2263; Mauna Loa, Haleakala, temporal He isotopic variations within, 88M/3959; Oregon, Newberry Volcano, mins., fluids from, isotope geochem., 88M/0745; USSR, Kamchatka and Kurile Is., active, geochem. monitoring, 88M/4583; Zaïre, W. African Rift, Nyiragongo, geochem. evolution, 88M/2229 Volcanology, ethics in, 88M/4546; facies concepts, 88M/6228

Volkonskoite-chromian smectite nomenclature problem, reassessment, 88M/0110

Voltaite, Greece, Peloponnesus, Katakolo area, from mud volcano, chem. anals., geochem. behaviour. 88M/1057

Wadeite-type phase of K₂Si₄O₉, energetics, vibrational spectra, 88M/2074

Wagnerite, Switzerland, Lepontine Alps, Simano nappe, from metapelitic rock, min., geochem., 88M/2653

Wakefieldite-(Ce), Pb-free, France, Orleans, B.R.G.M. collection, second occurrence

recognized, 88M/2624

WALES, min. species, supplementary list, 88M/3154; total and extractable tr. elem. contents of soils, 88M/1956; N, basin development during the Arenig, 88M/1142; chloritoid from low-grade pelitic rocks, 88M/6386; Ordovician ironstone deposition, age, controls, 88M/1143; Pitts Head Tuff fm., subaerial to submarine welded ash-flow Ordovician. 88M/2895: tuff. Carboniferous oolites. limitations of 'cement stratigraphy', 88M/6320: zonation of Carboniferous limestone cements, ion microprobe anal, of tr. elems. in calcite, 88M/5573; W. lineaments in enhanced Landsat images, 88M/1149; Abergwesyn-Pumpsaint area, revised stratigr., sedimentol., 88M/1144; Anglesey, dickite, occurrence, 88M/0109; Penmynydd schists, age of blueschist metamorphism, 88M/0007; Builth inlier, kinematics of strike-slip faulting, 88M/1139; Caerwys Tufa, Flandrian tufa deposit, descriptn., 88M/1416; Cardiff area, S. Wales Coalfield, geol. memoir, 88M/4634; Cardiganshire, history of mines, (book), 88M/3331: Deganwy, Bwlch mine, mineralization, 88M/6066; Denbigh Moors, microstructs. in deformed sediments, 88M/1147; Dolgellau, micro mins. from trial level, 88M/1566; Dolgellau Gold Belt, fluid inclusion model for genesis of ores, 88M/1904; Dyfed, Llandovery Series, type area, struct. geol., 88M/1155; Dyfed, central Wales synclinorium, struct., deformation history, evidence for long-lived basement struct., 88M/1154; Gower, Shipway limestone, sedimentation on stormdominated early Carboniferous ramp, 88M/6321; Harlech, Cambrian Mn deposits. genesis, diagenesis, 88M/1141; Llangranog lineament, Caledonian transpression zone, 88M/1153; Llechwedd Helvg, mins, of, 88M/1567; Pen-y-Holt Limestone, muddominated storm deposits from Lower Carboniferous ramp, 88M/2967; Snowdon volcanic centre, emplacement of geochem. distinct groups of rhyolites, 88M/2894; Snowdonia, Ordovician volcanic rocks, finite strain study, 88M/1148; Tremadoc 'thrust' zone, struct. features reinterpreted, 88M/1150; Tal y Fan metabasite. compositional controls on coexisting prehnite-actinolite, prehnite-pumpellyite facies assemblages, 88M/4706; Welsh Basin, Lower Palaeozoic succession, low grade, example of diastathermal metamorphism, 88M/6360; sedimentation and tectonics, 88M/1140; Bala lineament. tectonic evolution, 88M/1151; Welsis Borderland, Bailey Hill fm., Ludlow Series turbidites reinterpreted as distal storm deposits, 88M/1146; Shelve inlier, evidence for dextral oblique-slip fracturing implications for S British Caledonides 88M/6112; Wenlock turbidite systems petrol., 88M/1145

Waste, hazardous, non-radioactive underground disposal of, 88M/3638

-, radioactive v. radioactive waste

Water, accurate zinc charcoal reduction system for D/H measurements of, 88M/3285; automated system for isotopic equilibration of CO₂, H₂O for ¹⁸O anal., 88M/4070 guanidine hydrochloride method for detn. or O isotope ratios, and ¹⁸ fractionation between CO₂ and water at 25°C, 88M/4930; in amphibolite facies pelitic schists, local regional differences in chem. potential of 88M/6424; metal speciation in, anal., effects, (book), 88M/4961; multisample conversion of water to hydrogen by zinc for stable isotope detn., 88M/4929; oilfield, and sandstone diagenesis, 88M/5793; zeolitic, in scolecite at 20 K, neutron diffraction study of bonding of, 88M/3485

—, acid, Al solubility controls in, 88M/5382; Al speciation in, testing of model for Al-humic complexation, 88M/5894; elimination of matrix interferences in flameless AAS detn. Cu in, 88M/3288; field detn. of bromide in, 88M/1691

-, estuarine, chromatographic studies of dissolved organic matter, Cu-organic complexes from, 88M/0859; colloid stability, aggregation in, aggregation kinetics of riverine dissolved iron after mixing with sea-water. 88M/5830; equilibrium speciation model for Cu in, at 25°C, 88M/4072; film of organic matter at fresh-water/sea-water interface, 88M/0817; sampling by scuba diving, procedures for measurement of Hg concentrations in. 88M/3283; tr. metal adsorption modelling, particle-water interactions in, 88M/4087; France, China, dissolved Cd behaviour in, consequences for Cd supply to ocean, 88M/3625; New Zealand, Otago Harbour, Zn and reactive silicate distribn, in. 88M/0828; Netherlands, Scheldt estuary, organic complexation, control of dissolved concns. of Cu, Zn, 88M/2425; Spain, Cantabria, Suances estuary, heavy metal pollution, 88M/5322; USA, Washington, Columbia River, tr. metals in, following 18 May 1980 eruption of Mt. St Helens, 88M/0835

—, fjord, lignin, carbohydrates in, comparative geochem., 88M/4152; stratified, modelling of Mn cycling in, 88M/5802; Norway, Drammensfjord, permanently anoxic, Mn cycling in, 88M/5801; Framvaren Fjord, Hg in, 88M/5805; solution chem. of iron(II) in, 88M/5799; permanently anoxic, formation of framboidal iron sulphide in, 88M/5800; super-anoxic, S chem. of, 88M/5798; tr. metals in water column, 88M/5804; and Canada, British Columbia, Saanich inlet, anoxic, U, Ra, Th isotope distribns in, 88M/5803

groundwater, confined systems, phreatic-confined discontinuities, restricted flow in, 88M/5871; dating, 32Si in different aquifer types, implications for, 88M/5856; dating with He isotopes, 88M/5854; deep, and groundwater degassing, compn. of dissolved gases in, 88M/3836; deep granitic, fluid inclusions as source of dissolved salts in, 88M/3826; distribn. coefficients of radionuclides between dependence on various test parameters, 88M/5313; field study on initial ¹⁴C content as limiting factor in 14Cdating, 88M/5852; from crystalline rocks, noble gases in, 88M/3835; geochem. investigation of Fe-Mn phase change in, 88M/0819; geochem. of aquifer thermal energy storage, long-term test cycle, 88M/5773; He accumulation in, 88M/2122; in humid regions, weathering of silicates in soils and migration of Si in, 88M/3408; investigation of soluble In chelates for hydrothermal fluid tracing, 88M/2364; sulphate contamination in, from carbonate-hosted mine, 88M/5342; survey of applications of non-radioactive but neutron activatable tracers, 88M/5881; U adsorption from, by common fracture secondary mins., 88M/2185; U isotopic disequilibrium in, as indicator of anomalies, 88M/2458; young, isotopic, geochem. studies investigating genesis of C isotope content in, 88M/5853; Argentina, San Juan, Tulum valley, isotopic evidence for diff. origins of, 88M/5863; Australia, geochem., applications to exploration of U deposits, 88M/2392; Canada, isotopic compn., 88M/5876; Ontario, Superior Province, East Bull Lake pluton, 87Sr/86Sr values in, 88M/1974; Canadian Shield, geochem. trends for, 88M/3818; *China, Shanxi province, Taiyuan area*, ²³⁴U/²³⁸U ratios in, 88M/2390; Denmark, Ribe County, improved graphical computer technique applied to mapping of geol. and groundwater chem., 88M/2372; England, Berkshire, baseline geochem. condns. in Chalk aquifer, basis for groundwater quality management, 88M/2374; Oxfordshire, Harwell region, application of U-series disequilibrium to studies of groundwater mixing, 88M/5811; Finland, Fe, Mn in treatment plants, 88M/1033; France, Massif Central, Lodève area, anals. of Pb, U isotopes in, application to prospection of concealed U deposits, 88M/2377; U redox chem., Fe, Ra geochem., U isotopes in, 88M/4090; Japan, Takaoka, tritiogenic ³He in, 88M/5824; S Nepal, flow systems in wet alluvial fan, isotopic anal., 88M/5874; New Zealand, Tauranga, warm, in coastal basins, geochem., isotope identification, 88M/5826; S Oman, modern, fossil, in arid envt., 88M/5857; Poland, Sokołowsko, and volcanic rocks, relations between chem. of, 88M/0826; Zulawy Wislane region, F in, 88M/5814; N Switzerland, and gases in crystalline rocks, occurrence, 88M/3830; deep, envtl. isotope study, 88M/5873; USA, Arizona, Sonora Desert, Aravaipa Valley, in semi-arid basin, ¹⁸O, deuterium distribn. in, 88M/5861; central California, stable

- isotopic compn. as indicator of mid-Pleistocene tectonic evolution, 88M/5859; NE Washington, uraniferous, response of Douglas fir to, 88M/4178; West Indies, Haiti, Cul-de-Sac plain, isotopic study, 88M/5875
- —, —, saline, origin in granitic rocks, evidence from hydrothermal expts., 88M/3673; Canada, Ontario, Atikokan, fracture-filling gypsum assoc. with, 88M/3844; Canadian Shield, and brines in plutons, 88M/3820; halogen-bearing mins. in plutonic rocks, poss. source of Cl in, 88M/3821; models of min. controls on compn. of, 88M/3819; England, Cornwall, Carnmenellis granite, origin of, evidence from minor, tr. elems., 88M/3828; Finland, and brackish, 88M/3825
- —, hot springs, biogeochem., extractable lipids of cyanobacterial mat, 88M/5900; recent oceanic, model for formation of Mississippi Valley-type ore min. assocns. applied to data on, 88M/0666; Chile, Puchuldiza and Tuja, geochem., 88M/6280; USSR, Kamchatka, Mutnovskii, deuterium, 180 waters. 88M/0827
- ---, interstitial, Mediterranean, late Quaternary sediments, early diagenetic reactions, evaporitic salt influences, 88M/0825; USA, Colorado, Front Range, soil, of alpine watershed, Al chem.: fractionation, speciation, min. equilibria, 88M/0223
- —, lagoonal, France, Marseilles, Berre lagoon, distribn. of natural, artificial, radioactive isotopes, 88M/4089
- -, lake, alkaline, authigenic trioctahedral smectites controlling pH, alkalinity, silica, Mg concns., 88M/2386; atmospheric wet sulphate deposition and lakewater chem., 88M/4112; hypersaline, tr. metal geochem. of pore water brines, 88M/4098; oligotrophic, with seasonally anoxic hypolimnion, biogeochem. mass balance of ²¹⁰Po, ²¹⁰Pb in, 88M/0831; orientation textures in ice sheets of quietly frozen lakes, 88M/2032; Bolivia, Oruro-Caracollo, fluvio-lacustrine basin, isotopic study, 88M/5864; France, Savoy. Lake Aiguebelette, interstitial water, sediment chem., 88M/2375; New Zealand, Lake Waikaremoana, limnology, with ref. to littoral, pelagic primary producers, 88M/5332; Norway, humic, importance of acidity sources, 88M/2371; Senegal, Guiers Lake, chem. study, 88M/4097; SE Sicily, saline, geochem. features, 88M/2379
- —, meteoric, –basalt interactions, lab. study, 88M/2005; Canada, Ontario, assessing compn., relative humidity from ¹⁸O, ²H in wood cellulose, palaeoclimatic implications, 88M/0830; E China, H, O isotopic compns., 88M/5823; NE Iceland, –basalt interactions, field study, 88M/2370
- —, mineral springs, France, Massif Central, Cézallier, chem. study, evolutionary model, 88M/4085; geothermal system, geol. contraints, borehole reconnaissance, 88M/4086; Switzerland, Scuol-Tarasp, Engadine, isotopic geochem., 88M/5862

- --, natural, Au concn. in, 88M/5781; automatic detn. of I species by new flow-through electrode system, 88M/4934; detn. of inorganic Te(IV) in, 88M/0083; direct detn. of surface active substances in. 88M/4185; effect of ionic interaction on rates of oxidation in, 88M/3692; H isotope anal. using H2-water equilibration method, 88M/4073; Hg detn. in, 88M/3284; new method for rapid measurement of ²²⁴Ra in, 88M/4182; normative salt characterization of, 88M/3817; prediction of min. solubilities in, chem. equilibrium model for Na-Ca-Cl-SO₄-H₂O system, 88M/5401; simulated, pH, ionic strength dependence of ASV response of Cd, Pb, Zn in, 88M/0926; two column method for preconcentration of tr. metals in, on acrylate resin, 88M/1690
- —, pore-water, in oxidized ocean sediments, early diagenetic mobilization of metals in, 88M/5777; relationship between C isotopic compn. and bottom water O concn., 88M/5766
- —, precipitation, variability of isotopic compn., 88M/5877; Canada, isotopic compn., 88M/5876; Sweden, and runoff, ten yr. O isotope study, 88M/5879
- —, rainwater, disulphate ion as intermediate to sulphuric acid in acid rain formation, 88M/0403; flow injection, photometric detn. of hydrogen peroxide in, with N-ethyl-N(sulphopropyl) aniline Na salt, 88M/1693; relationships between concentration, deposition of nitrate and sulphate in, 88M/0401; Canada, biogenic S and acidity of rainfall in remote areas, 88M/1963; China, USA, acid, comparisons, 88M/0402; USA, Arizona, Sonora Desert, Aravaipa Valley, in semi-arid basin, ¹⁸O, deuterium distribn. in, 88M/5861
- resources development, isotope techniques in, (book), 88M/4964
- -, river, dissolved loads of, global chem. weathering of surficial rocks estimated from, 88M/5779; estuarine, dissolved V in, 88M/4071; Nd, Sr isotopic systematics of dissolved material in, implications for sources of Nd, Sr in sea-water, 88M/5771, implications for crustal evolution. 88M/5772; simulating effects of acidity on change in forms taken by Fe, Cr on mixing with sea-water, 88M/4102; solubility of colloidal ferric hydroxide, relevance to iron concentrations in, 88M/5356; transport of dissolved material, importance in Earth Sciences, 88M/2361; W Africa, Sénégal river, annual discharge of dissolved material, 88M/4096; monthly, yearly discharge of particulate matter, 88M/4095; France, Garonne, transport in solution and suspension, 88M/4088; New Zealand, Nelson, Takaka River, isotope hydrol., 88M/5829; USA, Mississippi River, variability of dissolved tr. metals in, 88M/4115
- —, saline, v. also brine, 88M/3827; in crystalline rocks, (book), 88M/3344; seasonally stratified coastal salt pond, biogeochem. of dimethylsulphide in, 88M/0832; Sr isotopic data, geochem. calculations as indicators for origin of, in

crystalline rocks, 88M/3827; Czechoslovakia, Bohemian Massif, hydrochem. evolution of, from crystalline rocks, 88M/3829; Dead Sea, dolomitization, sulphate reduction in mixing zone between brine and meteoric water in exposed shores, 88M/0768; USA, Michigan, Keweenaw Peninsula, minewaters, nature, origin, relation to similar deep waters in Precambrian crystalline rocks of Canadian Shield, 88M/0834

-, sea-water, deep ocean, He isotopes and heat flow on ocean floor, 88M/5683; heavy metal anals. in marine envt., 88M/4075; B isotope exchange between sea-water and oceanic crust, 88M/0821; Ba detn. in, by direct injection graphite furnace AAS, 88M/1683; cation hydrolysis, regulation of tr. metal compn. in, 88M/2359; concn., separation of tr. metals using single anion exchange bead, 88M/0084; continental shelf, model for interpreting hydrographic processes from stable isotope, Cd/Ca profiles of scallop shells, 88M/5833; detn. of interactions of Ni with dissolved organic material in, using cathodic stripping 88M/0818; voltammetry. detn. trimethyllead in, 88M/1685; direct detn. of Mo in, by adsorption voltammetry, 88M/4957; direct electrochem. detn. of dissolved V in, by cathodic stripping voltammetry, 88M/1686; dissolution of basalt glass in, mechanism, rate, 88M/3679; dissolved organic compounds characterization of adsorption processes by means of surface dilational props., 88M/4119; effects of alkaline aluminate waste dumping on water chem., 88M/0419; equilibrium speciation model for Cu in, at 25°C, 88M/4072; high precision measurements of alkalinity, total CO2 in, by potentiometric titration, 88M/5774; impact of atmospheric aerosols on Al tr. metal chem. in open ocean surface water, 88M/2396; in situ pump sampler for tr. materials in, 88M/3264; inorganic complexes in, influence of added chelating agents, 88M/2362; interactions of organic matter at hydrous alumina/sea-water interfaces, 88M/5769; kinetics of tr. elem. uptake by marine particles, 88M/4111; modelling dissolution behaviour of standard kaolinite, montmorillonite in, 88M/3377; new Teflon sampler for tr. metal studies in, 88M/1681; ocean ventilation during last 12,000 years: hypothesis of counterpoint deep water production, 88M/4106; Pb isotopic compn. measurements in, accuracy, precision, 88M/4183; preconcentration of Se, Sb from, for detn, by graphite furnace AAS, 88M/1687; Proterozoic, Nd, Sr isotopic evolution of, 88M/5768; radiochem. separation of ⁶⁰Co in, using continuous-flow coprecipitation-flotation, 88M/1692; release of heavy metals from harbour's sediment to, lab. study, 88M/4037; sampling by scuba diving, procedures for measurement of Hg concentrations in, 88M/3283; Se(IV) detn. by gas chromatogr. after coprecipitation with hydrous iron(III) oxide, 88M/0082;

simulating effects of acidity on change in forms taken by Fe, Cr on mixing with river water, 88M/4102; Sr isotopes in, acid rain, Cretaceous-Tertiary boundary, 88M/4076; T dependence of O isotopic fractionation between diatom silica and, 88M/2360; thermodynamic solubility relationships of inorganic V in marine envt., 88M/5767; tr. detn. by ICP-MS elem. silica-immobilized preconcentration on 8-hydroxyquinoline, 88M/4949; voltammetric study of adsorption of Cu(II) species on solid particles added to, 88M/2018; Angola, mouth of Congo, elem: migration, min. genesis, 88M/2305; Arabian Sea, property-property relations: 22° and 9° discontinuities, 88M/4103; Argentina, Blanca Bay, seasonal, spatial distribus. of Cu, Cd, Zn in, 88M/1984; Atlantic, cosmogenic ³²Si vertical profiles. 88M/4081; organic matter transformation near mouth of Amazon, 88M/5848; Cape Basin, dissolved As in, 88M/4101; Sargasso Sea, Co, Cu, Mn, Ni in, 88M/5845; Sargasso Sea and Gulf Stream, Cu complexation in warm-core ring waters, 88M/5846; NE Atlantic, deep ocean, ²²⁶Ra, Ba in, 88M/4079; equatorial Atlantic, dissolved Ar distribn., 88M/2385; NW Atlantic, particulate Mn dynamics in Gulf Stream warm-core rings, surrounding waters, 88M/2400; Baltic Sea, dissolved U, anals., 88M/2383; peculiarities of tr. metal distribn. in, 88M/5693; Bay of Biscay, and France, Gironde Estuary, near shore surface, Hg concentrations in, 88M/0823; Black Sea, H2S distribn., hydrol, elems, in bottom-water layer, 88M/2384; Caribbean Sea, Cariaco Trench, anoxic, REE distribn., 88M/5847; China, Xiamen harbour, coastal, concn., distribn. of tr. metals in, 88M/3634; DSDP, Site 590B, numerical models for diagenesis and Neogene Sr isotopic evolution of, 88M/0814; Indian Ocean, surface-water suspensates, geochem., 88M/4104; W Indian Ocean, 210Pb in, distribn., disequilibrium, partitioning between dissolved and particulate phases, 88M/5821; 226Ra in, 88M/5820; Japan Sea, protactinium isotope distribns., 88M/4105; Ligurian Sea, heavy metal data treatment with multivariate statistics. 88M/4092; Mediterranean Sea, entrainment of tr.-metal-enriched Atlantic-shelf water in inflow to, 88M/4091; Pacific, correlation of ²¹⁰Pb removal with organic C fluxes, 88M/4107; Celebes Basin, deep methane maxima, ³He anomalies, 88M/2393; N Pacific, deep-water circulation deduced from Si-O diagrams, 88M/2395; W in, 88M/4108; E Pacific Rise, hydrothermal vent, isotopic compn., gas concentration, 88M/2394; Scotland, Firth of Forth, coastal, influence of inputs to, on tr. metal concn. in, 88M/1955; South Africa, off Richards Bay, petroleum hydrocarbons in surface microlayer, sampling, GC-FID, GC/MS anal., 88M/2428; USA, Alaska, Orca Basin, S, O isotopic compns. of dissolved sulphate, implications for origin of high-salinity brine, oxidation of sulphides at brinesea-water interface, 88M/4114; California borderland basins, benthic fluxes, cycling of biogenic silica and C in, 88M/0837; Santa Monica Basin, Co, Cu distribn. in, 88M/5843; coastal S California, profiles of dissolved and particulate Th isotopes in, 88M/5844; Hawaii, above Loihi submarine summit area, methane anomalies, 88M/2398

—, spring, CO₂-rich, influence of *T* on Al, *REE* contents of, 88M/5764; W, Mo in, ICP-AES, ICP-MS detn., 88M/5943; *France, Massif Central, Cézallier region*, isotopic, geochem. study, min. sources, 88M/4084; tr. elem. concns. in, 88M/2376; *Italy, Molise region*, in carbonate structs., geochem. survey, 88M/0824; *Kenya, Kanam and Kanjera*, geochem. study of rocks and, implications concerning elem. mobility, uptake, 88M/0597; *New Zealand, Nelson, Waikoropupu Springs*, isotope hydrol., 88M/5829

-, stream, acidic mountain, Fe photo-reduction, oxidation in, 88M/5842; Antarctica, McMurdo dry valleys, geochem., role in evolution of four lakes, 88M/5831; France, non-polluted, chem. compn., 88M/4083; USA, Washington, near surficial organic-rich U deposit, geochem., 88M/0836; Virginia, Falling Spring Creek, CO₂ outgassing, calcite precipitation in, 88M/0833

—, surface, Canada, British Columbia, application of regional geochem. reconnaissance data for U in, to identifying environmentally sensitive areas, 88M/0408

- —, thermal, controls of chem. compn., 88M/3800; fossil, topaz occurrence in silica and alunite deposits, implication for high fluoride concn. in, 88M/2546; persistent time structs. in geochem. fields, 88M/4100; *Greece, Santorini*, hydrothermal field, As, Sb, Bi in, 88M/5703; *India, Konkan coast*, evaluation of reservoir *T* and local utilization of, 88M/2904; *New Zealand*, *North Island*, surficial, thiosulphate in, 88M/5790; *E Pyrenees*, ¹⁴C dating, 88M/0011
- —, thermomineral, Franco-Italian Alps, isotopic characterization, 88M/5849
- —, well, S. Pacific Island states, water quality, 88M/0829
- -rock reactions, mathematical model of computer simulation for, 88M/0594; Canada, 87Sr/86Sr ratios as indicators of, application to brines in Precambrian rocks, 88M/3822
- — systems, N. Switzerland, in deep crystalline rock, isotopic investigations, 88M/3831
- Wavellite, Belgium, Namur province, Haut-le-Wastia, occurrence, anals., 88M/4334
- Weathering crusts, Nb, Ta min. balance in, 88M/5556; India, Kerala, Kundara clay mine, clay min. transformation in, 88M/1766; Poland, Le'sna-Miłoszów deposit, basaltic, as clay casting matrix, 88M/3401; USSR, S. Krivoy Rog struct., late Archaean, min., geochem. features of, 88M/3412

- profiles, Portugal, Sintra igneous massif, petrogr., min. studies, 88M/2208
- sequences, India, Orissa, Pottangi and Panchpatmali bauxite-bearing plateaus, geochem. of, 88M/5717
- waste, Poland, Legnica, Dunino, basaltic, min. compn., 88M/0192; Lower Silesia, basaltic, min. compn., 88M/0193; basaltic, volcanism and development of, 88M/0194
- Weddellite, in lichens, moolooite inclusions in, 88M/1081
- Weloganite, named after W. E. Logan (1798–1875), short biogr., 88M/4840
- WEST INDIES, Grand Cayman Is., alteration of sparry calcite crystals in vadose setting, 88M/4326; biogenic structs., micrite in stalactites, 88M/3008; St Kitts, lithic breccias in pyroclastic flow deposits, 88M/4606
- WESTERN SAMOA, soils, effects of drying on mineral N status, 88M/0215
- Whewellite, contact, penetration twinning, 88M/5447; in lichens, moolooite inclusions in, 88M/1081
- Whitlockite, growth of, 88M/2054
- Willemite, fluorescence of, 88M/4831
- Witherite, USA, Illinois, Hardin County, Harris Creek fluorspar dist., occurrence, 88M/6479
- Wittichenite, phase relations in systems Ag₂S-Cu₂-PbS, Ag₂S-Cu₂S-Bi₂S₃, 88M/2044
- Wolframite, and scheelite, syngenetic, metamorphic redistribn. into veins, pegmatoids, geochem., 88M/5944; France, Brittany, Yaudet pluton, occurrence, 88M/3575; Portugal, Barroca Grande mine, compositional variation in, evidence for fault-controlled ore formation, 88M/6056
- Wollastonite, activated complexes and pH-dependence of rates of hydrolysis, 88M/3731; reactions with NH₄H₂PO₄, H₃PO₄, 88M/5469
- Wollastonite-2M (parawollastonite), crystal struct., 88M/3463
- Wood, angiosperm, gymnosperm, molecular aspects of peatification and early coalification of, 88M/4123; effects of early diagenesis on chem., stable C isotopic compn. of 88M/0843
- Woodhouseite, in hydrothermal ore deposits, products of apatite destruction during advanced argillic alteration, 88M/1060
- Wulfenite, Germany, Fichtelgebirge, Epprechtstein, occurrence, 88M/4814
- Wüstite, and periclase, bulk moduli, comparative study, 88M/1517; crystal struct., 88M/3493
- Xenoliths, (v. also clinopyroxenite, eclogite, granophyre, lherzolite, peridotite, ultrabasic xenoliths) assoc. with *Hawaiian hot spot*, 88M/2758; MARID suite in kimberlites, relationship to veined, metasomatized peridotite xenoliths, 88M/2764; *Iberian Peninsula*, occurrence, 88M/2741; *Italy*, occurrences, comparison with Alpine peridotites, 88M/2743; *Japanese island arc*, in basalts, andesites, dacites, 88M/2755; *Mongolia*, occurrence, 88M/2745; *Pacific, Ontong Java plateau*, deep-seated, from

- thick oceanic lithosphere, 88M/2756; Scandinavia, occurrence, 88M/2739; continental USA, in kimberlites, 88M/2735; USA, New Mexico, Kilbourne Hole, sulphide assemblages in, interpn., 88M/4415; USSR, occurrence, 88M/2745; Kurile–Kamchatka, USA, W. Alaska, arc, back-arc, petrol., 88M/2754
- —, lithospheric, SW USA, record of subduction processes and within-plate volcanism in, 88M/2736
- —, lower crustal, Mexico, Nd–Sr isotope compn., evidence for origin of mid-Tertiary felsic volcanic rocks, 88M/6221
- -, mantle, (book), 88M/1708; fluid inclusions in, 88M/2779; magnetic props., and magnetic character of crust-mantle boundary, 88M/2771; melting, dissolution under volatile-free condns., 88M/2773; metasomatic events recorded in, overview, 88M/2775; metasomatism, fluid generation in, 88M/2774; perspectives, review, 88M/2782; upper, metasomatic min. titanates in, 88M/2778; E Australia, greatest concn. in world, 88M/2751; Western Australia, from kimberlites, lamproites, 88M/2752; British Isles, Palaeozoic mantle sample, 88M/2740; Canada, occurrence, 88M/2734; China, from kimberlites, 88M/2747; E China, and alkali-rich host 88M/2746; Central Europe, rocks, 88M/2744; Greenland, occurrence, occurrence, 88M/2733; India, Cuddapah basin, in picrite, 88M/2860; Lesotho, Matsoku kimberlite pipe, metasomatic, enrichment phenomena in garnet peridotite facies, 88M/3014; Mexico, occurrence, 88M/2737; New Zealand region, review, 88M/2757; South America, occurrence, 88M/2738
- Xenon, isotopic fractionation of Kr, Xe implanted in solids at low energies, 88M/0509
- Xenotime, synthetic, end-member analogues of, surface reactions of, and evolution of natural waters, 88M/5444; *Italy, Novara, Maddalena quarry*, occurrence, 88M/1577
- Xonotlite, reactions with NH₄H₂PO₄, H₃PO₄, 88M/5469; *Italy, Vicenza*, occurrence, 88M/1578
- X-ray absorption spectrometry, use of $L_{\rm I}$ and $L_{\rm II}$ absorption edges in elem. quantitative anal., 88M/1660
- spectroscopy, *in situ* study of surface complexes: selenium oxyanions on α-FeOOH, 88M/3299
- analysis, advances in, Vol. 30, (book), 88M/3326; energy dispersive, of ocean ferromanganese crusts using conventional ZAF corrections, 88M/1662
- apparatus, MAX80, large-vol. high-P apparatus combined with synchrotron radiation, 88M/3709
- diffraction analysis, applications of Level
 III Powder Diffraction File Computer
 Database in data management envt.,
 88M/0070; computing intensities, Bragg
 angles using microcomputer, 88M/3325;
 deconvolution of powder diffraction spectra,
 88M/3271; detn. of mica cell parameters by,
 88M/3275; differential, correction of

- mismatches in 20 scales during, 88M/0123; general theory of effect of granularity in, 88M/5073; imaging techniques for, 88M/3302: indexing, least-squares refinement of data for unit-cell dimensions, revised Appleman-Evans programme, 88M/1669; instrumental capabilities in, comparative techniques, 88M/3323; lattice parameter detn. using synchrotron powder data, 88M/3322; LOTUS 1-2-3 spreadsheet to aid data reduction for publication of XRD data, 88M/4925; modal anals. of granitic rocks by quantitative XRD, 88M/0072; new high-T camera for studies above 2200°C, 88M/3324; on-stream analyser for min. concentrators, 88M/3321; optimization of step size in diffractogram collection, 88M/4924; 'PC-PDF': a search/display system, 88M/3272; PDF file, database, critical review of sets 1 to 32, 88M/4923; PDF min. file workbook, 88M/4922; quantitative detn. of min. content of geol. samples, discussion, 88M/0066, 88M/0067; quantitative method using full diffraction pattern, 88M/0068; quantitative phase anal. by linear regression of chem. on XRD intensity, 88M/0071; simple attachment to Debye-Scherrer cameras to obtain powder patterns from single crystals, 88M/1659; simple system for enhanced data collection, 88M/3273; standard ref. materials for, calibration using d-spacing standards, 88M/3274
- fluorescence analysis, comparison of dilution strategies for dealing with unanalyzed elems. in, 88M/3311; detn. of tr. elems, in complicated matrices, 88M/3320; energy-dispersive, application of inverse Monte Carlo method to, 88M/3307; energydispersive, monochromatically excited, background intensities, utilization in quantitative anal. by, 88M/3309; energydispersive, use of scattered secondary target radiation in, fundamental-parameter method for matrix correction, 88M/3310; high resolution 88M/3303; spatial in, introduction, (book), 88M/0099; imaging techniques for, 88M/3302; Monte Carlo simulation of spectra from multi-elem. homogeneous, heterogeneous samples, 88M/3308; of geol. materials using fundamental Rousseau's algorithm. 88M/3306; quantitative, advances fundamental-parameter methods 88M/3305; robotic automation applied to, 88M/3304; wide area networking of XRF generated geochem. data in national geol. survey, 88M/3319
- holography, demonstration with X-ray laser, 88M/1781
- microanalysis, electron probe, compositional dependence of Bremsstrahlung background in, 88M/0073; of curved samples, particles, atomic number correction in, 88M/1661; of thin films, Bremsstrahlung background in, 88M/4959
- microfluorescence analysis, of geol. materials, 88M/3300; parameters affecting, 88M/3301
- microtomography, 3-D, 88M/1663

 spectrometers, energy-dispersive, comparison of dual-channel wavelength and secondary-target, 88M/3315

 spectrometry, energy dispersive, fly ash anal., 88M/1684; sequential and simultaneous, layered synthetic microstructs. in, 88M/3314

Yakhontovite v. clay minerals, smectite

YEMEN ARAB REPUBLIC, Al Mukha, Jabal an Nar, Upper Miocene volcanic centre, 88M/1316

Yugawaralite, v. zeolite

- YUGOSLAVIA, Alinici, monazite in hydrothermal veins, 88M/6077; Bor Cu mine, investigations of bornite, 88M/2625; Croatia, Baranja, andesites, pyroclastics, petrogr., geochem., 88M/6242; Krka River Estuary, heavy metal distribn. in recent sediments, example of sequential extraction anal., 88M/3627; Macedonia, Demir Kapija-Gevgelija ophiolite massif, petrol., 88M/6177; Ravnaja, liquid/gas inclusions of fluorite, microthermometric studies, genetic interpn., 88M/0305
- ZAÏRE, cosmogenic 10Be in alluvial diamonds, implications for ³He contents, 88M/0613; ikaite pseudomorphs in deep-sea fan, intermediate between calcite and porous calcite, 88M/1063; solar-type Ne in cubic diamonds, 88M/3850; unusual quartz crystal, 88M/2600; W. African Rift, Virunga, Nyiragongo volcano, geochem. evolution, 88M/2229; Mt. Nyiragongo, U, Th enriched nephelinite, petrol., geochem., bearing on ancient mantle metasomatism, 88M/2230; Kivu rift, Biega, alkaline ring complex, min., petrol., geodynamic significance, 88M/4494; Kahuzi-Biega, basalt, min., petrol., 88M/4572; Kivu, Kobokobo, pegmatite, mineralogy, 88M/4493; furongite, second occurrence, 88M/1074; Ludjiba, ludjibaïte, new min., 88M/6093; Roan of Shaba, authigenic K-feldspars from volocanic rocks, 88M/1007; Shaba, Biano, sandstone, petrogr. study of silicious cement, originally calcite, dolomite, 88M/4654; Zadinian group, late Proterozoic, bearing on origin of W.-Congo orogenic belt, 88M/6119
- ZAMBIA, aquamarine, descrptn., 88M/0586; primary Au mineralization, geol. controls, 88M/0326; E., Proterozoic stratabound mineralization, 88M/1888; Bagweulu block, gold in sedimentary cover, 88M/0314; Kaluwe complex, volcanic carbonatites, petrol., 88M/4490; Mkushi, Chilata mines, Lukashasi Bridge, pegmatitic microcline, min., chem. compn., 88M/6038; Pan-African Zambezi belt, marbles, calc-silicate rocks, geochem., 88M/5752
- Zeolite, application of, for treatment of radioactive waste, 88M/5330; application to catalysis, 88M/5304; CO₂ adsorption in, separation, purification of compn. of marsh gases, 88M/3614; dealumination of, with SiCl₄ or (NH₄)₂SiF₆, 88M/3744; hydrothermal conversion of trachytic glass into,

88M/5486; isolating individual chains of selenium by incorporation into channels of, 88M/2606; large crystals, potential growth in space, 88M/3745; molecular sieve, synthesis. 88M/5487; new builder for laundry detergents, 88M/5305; proposed synthetic ECR-1 struct., new framework topology, 88M/1817; (Si, Al) ordering in framework of, 88M/1816; zeolitization of kaolinite to prepare detergent grade zeolite A, 88M/3392; Italy, Sabatini volcanic dist., SH2 deep well, contact metasomatic and hydrothermal mins., 88M/1452; Pacific Ocean, Daito ridge and basin province, in sandstones, chem., origin, 88M/6347; USA, Nevada, Yucca Mt., in tuffs, diagenetic mins., distribn., chem., 88M/1359

—, 'aerinite', new data, attributed to zeolite group, 88M/4284

—, analcite, ²⁹Si NMR study of Si,Al ordering in, 88M/5127; Ireland, Carrickfergus, Antrim, Mg-rich, 88M/1013; Japan, Fukuoka Pref., Munakata coal field, zeolitic diagenesis of Palaeogene formations, 88M/4744; Poland, Lower Silesia, Culm fm., occurrence, 88M/2603; USA, Washington, Robertson Pit, Crescent fm., occurrence, 88M/4833

ashcroftine, struct. with enormous polyanions, 88M/3484

- —, clinoptilolite, quantitative detn. in soils by cation-exchange capacity method, 88M/3383; technique for separation of, from soils, 88M/3259; Japan, Fukuoka Pref., Munakata coal field, zeolitic diagenesis of Palaeogene formations, 88M/4744; Turkey, Çankiri-Çorum basin, from continental Tertiary sediments, 88M/4281; USA, Texas, in soils, 88M/1014; Wyoming, Sweetwater County, Fort LaClede deposit, Na, Ca, ammonium exchange on, 88M/3384
- —, dachiardite, USA, Wyoming, Yellowstone National Park, occurrence, anals., 88M/4282
- —, epistilbite, acentric, with domain struct., 88M/3487
- -, faujasite, acidity behaviour of, 88M/3746
- —, ferrierite, statistical, true symmetry of, poss. absence of straight T-O-T bridging bonds, 88M/5128
- —, gobbinsite, new min., Rietveld refinement of crystal struct., 88M/3486
- —, gonnardite, and disordered natrolite-group mins., distinction, relations with mesolite, natrolite, thomsonite, 88M/4280
- —, harmotome, Poland, Pieniny Mts., Biała Woda Gorge, in melabasalt, occurrence, descriptn., 88M/2605
- —, heulandite, Japan, Fukuoka Pref., Munakata coal field, zeolitic diagenesis of Palaeogene formations, 88M/4744
- —, —laumontite equilibrium at 1000 to 2000 bar P_{fluid} , exptl. investigation, 88M/2088
- —, laumontite, Japan, Fukuoka Pref., Munakata coal field, zeolitic diagenesis of Palaeogene formations, 88M/4744
- —, levyne, Australia, Victoria, Clunes Goldfield, occurrence, 88M/6074
- —, merlinoite, *Indian Ocean*, in Mn nodules, 88M/1015

- —, mesolite, Australia, Victoria, Clunes Goldfield, occurrence, 88M/6074
- —, natrolite, coordination polyhedra in structs. of, 88M/0264; Australia, Victoria, Simmon's Bay, arches, occurrence, descriptn., 88M/2604; USA, Washington, Robertson Pit, Crescent fm., occurrence, 88M/4833; USSR, Kotui River basin, from amygdaloidal lava, 88M/6046
- —, offretite, New Zealand, IR and adsorption studies, 88M/6048
- —, pahasapaite, USA, South Dakota, Tip Top pegmatite, new beryllophosphate zeolite, 88M/2664
- ---, pollucite, new family of silicate phases with pollucite struct., 88M/3483
- —, roggianite, revised chem. formula, zeolitic props., 88M/4283; Italy, Ossola, Val Vigesso, occurrence, 88M/1575
- —, scolecite, neutron diffraction study of bonding of zeolitic water in, at 20 K, 88M/3485
- -, stellerite, three types, anals., 88M/1016
- ---, stilbite, crystal chem., struct. refinements, 88M/0267
- --, thomsonite, Australia, Victoria, Clunes Goldfield, occurrence, 88M/6074
- —, yugawaralite, neutron diffraction study at 13 K, 88M/3488
- —, ZSM-5, location, disorder of tetrapropylammonium (TPA) ion, improved framework accuracy, 88M/0268
- ZIMBABWE, and Australia, Archaean Au mineralization, S isotope compns., genesis, 88M/0320; Archaean Au deposits, geol. setting, 88M/0328; Archaean Au metalloexploration, 88M/0910; genesis, Pb isotope investigations, deposits, reappraisal, 88M/0330; Au mines in Archaean granitic rocks, 88M/0329; gold, geochem. orientation studies, 88M/0911; soils, B horizons, clay mineralogy, 88M/5040; Belingwe greenstone belt, Au in upper greenstones, lithospheric extension models, 88M/0331; uniquely fresh 2700 m.y. komatiite, mineralogy, 88M/4571; Commoner mine, Archaean gold-telluride mineralization, 88M/0325; Dickenson gold mine, S sources in, as suggested by S isotopes, 88M/0322; Harare greenstone belt, Selby prospect, massive sulphides in Archaean black shales, integrated geol., geochem., geophys. surveys, 88M/0909; Kadoma dist., Nando and Pinkun mines, Archaean Au mineralization, 88M/0316; Venice group of mines, Au mineralization related to shear zones, 88M/0370; Lennox mine, Au mineralization in Fe formation. importance of contrasting modes of deformation, 88M/0371; Magondi mobile belt, geol. evolution, 88M/6120; Mhangura, Redwing mine, Au mineralization in altered Proterozoic ultramafic dykes, 88M/0372; Mvuma, Athens mine, Archaean Au-Cumineralization, 88M/0324; Renco mine, controls on deposition of Au, Cu, Bi, 88M/0373
- Zinc, field detn. in sulphide materials by flameless AAS, 88M/4181; Finland, Puolankajärvi fm., in amphibolite facies, staurolite-bearing mica schists,

- metamorphic behaviour, petrogenetic significance, 88M/0797; New Zealand, Otago Harbour, distribn. in estuary, 88M/0828
- mineralization, France, Tarn, Noailhac-Saint-Salvy, 88M/0628
- --copper deposits, Canada, Manitoba, Lynn Lake, Nicoba, geol., prelim. results, 88M/3167
- lead deposits, Australia, Tasmania, Rosebery, tourmaline-rich rocks assoc. with, 88M/6009; Canada, Nova Scotia, Eastville, Meguma group metasediments, stratabound, 88M/1927; Yukon, Selwyn Basin, sedimenthosted stratiform, anoxic stratified oceans as S source in, 88M/3995; Spain, Guipúzcoa, Legorreta, metallogenic study, 88M/1909; v. also lead-zinc deposits
- -- -baryte deposit, *Ireland*, *Silvermines*, genesis, fluid inclusion, stable isotope evidence, 88M/0366
- - -fluorite deposits, *China, Taolin*, example of problems in fluid inclusion research on min. deposits, 88M/1922
- -- -silver deposits, Canada, Yukon, Anvil Range, stratiform, S, Pb isotope studies, 88M/0656; USA, , Deer Trail, genesis, fluid inclusion, stable-isotope studies, 88M/2187

- Zincblende-pyrite deposit, *China*, *Guangxi*, *Beishan*, stable isotope geochem., 88M/2168
- Zincochromite, SSR, Karelia, new min., 88M/1098
- Zincocopiapite, Switzerland, Valais, occurrence, props., 88M/2639
- Zircon, alpha-decay-induced fracturing in, transition from crystalline to metamict state, 88M/3122; 'butterfly' twin, descriptn., occurrences, 88M/6002; genetic types of, in metamorphic rocks, SEM study, 88M/4695; phys., chem. response to deformation, 88M/6001; radiogenic, fissiogenic, nucleogenic noble gases in, 88M/5550; Belgium, in tonstein, morphol. study, stratigr. importance, 88M/4645; China, Yanshan orogeny, from two diff. mineralized granite typomorphic characteristics, types, 88M/4242; France, Haute Loire, Espaly, gem-quality, fission-track mapping of U in, 88M/0974; India, Orissa, occurrence, 88M/4824; Italy, Baveno-Mottarone pluton, characterization of granitic facies by typologic study of zircon populations, 88M/2832; New Zealand, Taranaki, McKee fm., heavy min. suites of core samples, implications for provenance, diagenesis,
- 88M/4664; Norway, Rogaland, charnockitic rocks, petrogenetic implications, 88M/2542; Sri Lanka, cat's-eye, study, 88M/5499; USA, New Hampshire, observations, controls on occurrence of inherited zircon in Concordtype granitic rocks, 88M/2276; USSR, Anabar Shield, in eclogites, 88M/4740; Kamchatka, in ultramafic volcanic rocks, compn. of, 88M/4244
- crystals, USA, Arkansas, Potash Sulfur Springs igneous complex, large, U/Pb age, 88M/4430
- Zirconia, cubic, coated with synthetic diamond powder, descrptn., 88M/0586
- pressure medium, prepared by powder compaction with Na silicate solution, props. of, 88M/3710
- Zirconium, behaviour in alkaline magma, 88M/4243
- systems, zirconium hydroxide–fulvic acidswater, solubility, complexing in, in relation to Zr migration in natural waters, 88M/0492
- Zirconolite, Algeria, Laouni layered intrusion, new natural occurrence, 88M/1036
- Zoisite v. epidote



Mineralogical Abstracts

The Mineralogical Society of Great Britain and the Mineralogical Society of America are the joint publishers. The periodical can be obtained directly from the Publications Manager, Mineralogical Society, 41 Queen's Gate, London SW7 5HR, or through any bookseller.

Annual Subscription for one year (one volume of four issues and an index), post free: £120 or US \$230.

Back Issues: Volumes 1-13 of Mineralogical Abstracts were published combined with the Mineralogical Magazine (Volumes 19-31) and are not available separately, except Volume 1 which is only available as a reprint. With the exception of Volume 2 which is out of print, back issues of the Magazine containing Abstracts are available at £3.00 or US \$7.50 per issue. Volumes 14-27 of Mineralogical Abstracts are available separately at the same price. Volumes 28-32 are available at £10.00 or US \$25.00 per issue. Volume 33 onwards are of varying prices and the office should be contacted for this information.

Members and Fellows of the Mineralogical Society of America and Members of the Mineralogical Society of Great Britain may purchase journals for their personal use at a 33% discount.

Postage must be prepaid on all orders for back issues. When an order is received, an invoice will be sent showing cost including postage: the order will be despatched when payment is received.